# FASTI TEMPORIS CATHOLICI

AND

# ORIGINES KALENDARIÆ.

BY

EDWARD GRESWELL, B. D.

FELLOW OF CORPUS CHRISTI COLLEGE, OXFORD.

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# FASTI CATHOLICI.

## DISSERTATION IX.

*Objections and difficulties.*

### CHAPTER I.

*Objections which may be made to the principles and assumptions on which we have hitherto proceeded; and the answers to them.*

SECTION I.—*Reasons for stopping at this period in the prosecution of the proper subject of the work.*

THE regular course and prosecution of our subject would now require us to enter on that branch of our inquiries which is destined henceforward to occupy our time and attention exclusively; and which we entitle *Origines Kalendariæ:* but before we do this we consider it advisable to stop for various purposes. Some things in the preceding part of our work were reserved for future explanations; and we shall not have a more convenient opportunity of supplying those explanations than the present. Besides this we are well aware that the principles and assumptions on which we have hitherto proceeded are not so obvious at first sight, nor so unquestionable, but that objections may possibly be raised to them; which we are bound to anticipate, and to the best of our ability to answer. We propose therefore to suspend the resumption of our proper subject until this preliminary duty shall have been discharged; and such objections and difficulties, as appear to us most likely to occur to

the minds of our readers, shall (if possible) have been satisfactorily answered and removed.

### SECTION II.—i. *The distinction made by Scripture between the first three days of the hexaëmeron and the last three.*

The first difficulty of this kind, which we consider likely to have suggested itself, affects the reckoning of the noctidiurnal cycle; that is the first and simplest of the measures of time, and the ultimate element of all. We have considered this cycle to have gone on uniformly and subject to one and the same law from the very first day of the Mosaic creation; and yet Scripture itself seems to have made a distinction between the first three days of the same hexaëmeron or week of creation and the last three.

That Scripture has made a distinction of a certain kind between the days of the hexaëmeron themselves cannot be denied; but it is not one which affects the reckoning of the cycle of night and day. It is certain that Scripture begins the account of the work of creation with summing up the proceedings of the first day in the terms, "And there was evening and there was morning, *one* day;" and ends it with summing up those of the last in the same manner; "And there was evening and there was morning, the *sixth* day;" and subjoins the same summary of the proceedings of the day at the end of every day between: so that Scripture itself makes no distinction in its mode of reckoning these days from the first to the last; but applies the same rule to them all.

If then it makes any distinction between the first three days of this week and the next three, it could not be a distinction which affected them as parts or members of the succession of night and day. It is a distinction too rather implied in Scripture itself than affirmed by it; but whether implied or affirmed, it is nothing which even Scripture supposes to have affected the succession of the noctidiurnal cycle. It is certainly to be collected from the Scriptural account of the week of creation, that both the sun and the moon became visible on the fourth day; and from that fact it appears to be only a necessary inference that neither of them could have been visible before the fourth day. It follows that for the first three days of the hexaëmeron the sun

could not have been visible; and this distinction between the first three days of this week and the last three *de facto* must be allowed to have existed; viz. that for the first three there was no visible sun; for the last three there was.

But there was light on the first three days notwithstanding this distinction, as much as on the last three. No one requires to be told that the act of the first day itself was the production of light; and the distinction thereby established between the alternation of darkness and light. And if there was both darkness and light on this first day, no one can doubt that there must have been the same on each of the other two. But if there was both darkness and light, each in its turn, on each of these days; there was both night and day, both an evening and a morning, on each, every thing in short which the integrity of the noctidiurnal cycle could require; with this difference only, that the distinction in question, indispensable to this integrity, the alternation of light and dark, each in its proper order of succession to the other and each in its proper proportion to the other, in this first instance of all was neither mediately nor immediately determined by the sun. It is clear that in the estimation of Scripture this was not sufficient to make these three days an exception to the common rule and reckoning of the noctidiurnal cycle; though it must be admitted that there have been chronologers who have set these three days aside from the general succession of noctidiurnal time, and have begun their actual reckoning of the noctidiurnal cycle from the fourth day, not from the first.

The primary element of time is the revolution of the earth about its own axis; and the proper measure of that revolution, from the mean sun to the mean sun again, is the period of 24 hours. The cycle of night and day is the alternate succession of darkness and light which accompanies this revolution perpetually. This latter is the sensible test of the former. Without the visible distinction of darkness and light, as succeeding each other at stated intervals of time, mankind would have no sensible proof of the reality of the diurnal revolution, except that of the apparent motion of the stars above their heads; and this sensible attestation of the reality of that revolution is due to the instrumentality of the

sun: so that, while the sun continues to shine on the earth and the earth to revolve about its own axis, it is impossible that there should not be this external and visible proof of the reality of that revolution also.

But suppose the light of the sun withdrawn: is it a necessary consequence that the diurnal revolution also must cease? For if not, then it is conceivable that there might still be the same measurement of time by means of the revolution of the earth about its own axis, and yet no sensible distinction in the process of that revolution, no succession of light and dark, no cycle of night and day. Nor does it follow that because such beings as men could not judge of the actual succession of time, as measured by this revolution, under such circumstances, there might not be beings in the universe who could: much less that the presence or the absence of any such outward distinction in the parts of the succession as this would make any difference to the Divine apprehension of the noctidiurnal succession, or of the course and succession of time as measured perpetually by the revolution of the earth about its own axis.

It does not indeed appear that the case which we are supposing was ever of actual occurrence; at least in connection with our own system; when the first thing done, preliminary to any other operation or effect in the process of creation itself, was to bring into being the sensible and standing proof of the reality of the diurnal revolution in the alternation of light and dark which accompanies it. Were there reason to suppose that this revolution itself was not going on during the first three days, exactly in the same manner as during the next three days, and in fact as it has done ever since; that would be a serious difficulty. We should lay ourselves open to the objection of having based the whole of our system upon the assumed existence of three days which never had an actual existence; or had a different actual existence from that of any three days after them. But we know of no foundation for any such distinction as this. It can never be proved from Scripture that the Mosaic creation is the absolute commencement of *any one* of the existing measures of time, except relatively to ourselves and to that creation as the beginning of our own proper system of

things. There is no difficulty therefore in supposing that, though the light of the sun might have been extinguished before the epoch of the Mosaic creation, the revolution of the earth about its own axis might never have been interrupted.

No one can doubt, (no one at least is at liberty to doubt, and no one ought to doubt,) that for the particular interval between the ante-mundane state of things and the Mosaic creation, whatsoever the duration of that interval might be, there must have been reasons which required the temporary extinction of the light of the sun, and yet no interruption of the course and succession of time in any of its measures. What those reasons were we can never know for certain at present; because Scripture itself has been silent concerning them. All that we will venture to say on that question is, That, had more light been thrown by revelation on the economy of the Mosaic creation, and on its connection with every antecedent state of things in its proper order of time, and particularly as the epoch of the creation of mankind; possibly it might have appeared that the process of creation even from the first was purposely reflected in the Mosaic as in a glass; and that the reasons which required this special dispensation, affecting the first three days of the Mosaic creation, had their foundation in the analogy of the first act of creation itself, at a distance of time immeasurably and incalculably anterior to the Mosaic.

But with regard to this dispensation itself; it appears from the testimony of Scripture that the proper act of the first day was the production of light; from which fact it must have been inferred that the preexisting state of things was one of darkness, even had Scripture itself not told us just before, that "Darkness *was* upon the face of the deep[a]." We may collect also that light must have been called into being on this first occasion at once, and by the fiat of the Deity: that there could have been no intermediate state of things between light and dark, like that of twilight; but that light was evoked instantaneously out of the midst of darkness, and *that* darkness such of which the human imagi-

[a] Gen. i. 2.

nation at present cannot form even an idea; the darkness of chaos itself.

The observation of Longinus on those simple words of Genesis[b], "Let there be light, and there was light," is well known. They are an instance of the true sublime; but the principle of their sublimity resides in the just and adequate idea which they convey of Omnipotence: that with Omnipotence to will is to do: the word is no sooner pronounced than followed by the effect. The idea of instantaneousness is necessarily included in that of omnipotent energy. We might have inferred then, even from the just observation of the heathen critic, that the instantaneous production of light was implied in these few words. The same conclusion is deducible from the testimony of St. Paul; who refers to the first act of creative power and energy thus exerted in the production of light in the words, Ὁ Θεὸς ὁ εἰπὼν ἐκ σκότους φῶς λάμψαι[c]: words, which would not have been used by any one who paid the least attention to propriety of language, except to express the instant effulgence of light out of the midst of darkness.

With regard to the manner indeed in which this light itself was produced, it is not for us to explain it; Scripture not having thought proper so to do. Scripture however has told us all that we have any occasion to know concerning it; viz. that God willed it, and therefore it came into existence. It is just as possible with God to give light without the sun, as to withhold light with the sun. No human eye indeed could have witnessed the former phenomenon at the Mosaic creation; but human eyes did witness a phenomenon similar to it, probably for 40 years, in the pillar of the cloud which for 40 years gave light by night to the people of Israel in the desert: and they twice witnessed the latter, once in the miraculous darkness of Egypt, and again in the miraculous darkness at the crucifixion. And if we construe the unfulfilled prophecies of Scripture rightly, they are destined to witness it a third time, and on a much greater scale than ever, before every thing comes to an end.

We meet with traditions, which go far back into antiquity,

[b] Gen. i. 3. [c] 2 Cor. iv. 6.

and among nations the oldest of mankind; from which it might be inferred at first sight that, in supplying the absence of our own sun at the beginning of the system to which it serves at present as the appointed source both of light and of heat, it pleased the Creator to make use of the light of one of the fixed stars. Traditions we say are extant which imply that Sirius, (the nearest to our system of the fixed stars, and consequently the largest and brightest, as they all appear to us,) at the beginning of the present system of things, was in the ascendant; and in some manner or other directly connected with the origin of the system itself. And though such traditions answered no other use or purpose, they would still render an important service in explaining and accounting for those peculiar feelings, sometimes of superstitious dread, sometimes of reverential awe and admiration, with which this star in particular, as the most active and powerful in its influence, and as the most closely connected with our earth, of all the host of heaven, appears to have been always regarded in the east. It is certain too, and it may at any time be put to the test of calculation, that, at the true season of the year of the Mosaic creation, Sirius and the sun were approaching to a state of conjunction, and Sirius was rising only a short time after the sun.

So far however as concerns the extraordinary provision of light on this occasion, it is expressly declared in Scripture that the light, which supplied the absence of the sun on the first of these three days, was called forth by the mouth of God; and, as St. Paul further insinuates, out of the womb of darkness. Consequently it could not have been derived, mediately or immediately, from any of the stars. It is added in Scripture too, that God himself divided this light from the darkness; and that, agreeably to the distinction which he himself had just established, he called the light *day* and the darkness *night*. The meaning of which representation we apprehend to be that even the light, now produced in the first instance by the act of the Creator himself, was allowed no longer a term of existence than the ordinary interval of a day: and therefore that even this light, so brought into being at one period of this first day, must have been extinguished again at some other. And from this we must infer

that it was produced in the morning and extinguished again in the evening of this day; in each instance by the act of the Creator himself; in order that day might begin to be reckoned from the moment of its appearance, and night from the moment of its disappearance. For this it appears to us is the only construction which can properly be put on the words, "And God divided the light from the darkness [d]."

And when we consider that this was taking place in this first instance of all at the vernal equinox, it will appear not only a probable, but possibly even a certain and necessary, inference, that the moment prescribed for the first manifestation of this light must have been the proper beginning of the equinoctial day, 6 A. M. of mean time; and the moment appointed for its disappearance again, the proper beginning of the equinoctial night, 6 P. M. of mean time. In this case also we shall perceive a much greater propriety in the use of the word *divided*, as applied to this fact of the separation of light and of darkness, and to the interval assigned to each. The proper notion implied in division is that of equipartition; and where the subject of the division was the period of 24 hours, and the parts of the division were the equinoctial day and the equinoctial night, it is almost self-evident that division in such a case must have been tantamount to equipartition. The natural proportion of night to day and of day to night is that of equality; such as can hold good between them only at the equinoxes. The night and the day make up the noctidiurnal cycle; and each of them has the same right to one half of the period of 24 hours which properly measures this cycle. Scripture itself, as we have seen [e], designated the equinoctial day as a *perfect* day; as the type or exemplar of what a perfect day, a day neither more nor less than the truth of its nature, ought to be.

And herein we may observe another coincidence. Had this separation of the first day and of the first night even at the season of the vernal equinox been made in the usual manner by the appearance and the disappearance of the sun, it could not without a miracle have been effected so completely in accordance to the proper limit and measure of the duration of each, required by the necessity of the case. It

[d] Gen. i. 4. [e] Supra, Diss. v. ch. ii. sect. vi. vol. i. 273.

is well known that according to the existing constitution of things, and while the atmosphere surrounds the earth on all sides, the phenomenon of twilight is an inseparable accident of the alternation of light and dark, and of the distinction of day and night as made by the sensible appearance and disappearance of the sun; and that there is daylight some time before the actual appearance of the sun, and some time after its actual disappearance; and that just before or just after its first or its last appearance there is almost the light of perfect day. And this phenomenon could not have been prevented even in the first instance of all, except by suspending the refractive power of the atmosphere; and yet to whatsoever extent it might have been permitted to prevail in this first instance of all, and at the equinox, to the same extent it must have interfered with the just proportion of light and dark one to the other, at all times in the abstract, and particularly so at the equinox; if that is one of strict equality.

Under the circumstances of the case, there could be no such disturbance as this. On the first day of the hexaëmeron the atmosphere was not yet in existence. The production of the atmosphere, which the Hebrew calls Rekiang, the Septuagint Στερέωμα, the vulgate Firmamentum, and our own version renders by Firmament, was the work of the second day. The division itself was made not by the appearance or the disappearance of the sun, but by the act of the Deity; causing the light to begin to shine at a particular moment, and to cease to shine at a particular moment too; the former defining the beginning, the latter the end, of the natural interval, measured in mean time, which was the fittest to constitute and to be called the equinoctial day; and to have for its counterpart a similar interval, devoted to and commensurate with the equinoctial night.

We may infer also from the fact of there being as yet no atmosphere on this first day, that the light, which supplied the visible presence of the sun and made the day, was probably radiated from the zenith; that being, so far as we can conceive, the only point from which it could emanate so as to fall on all parts of the surface of the earth beneath it, and to illuminate it to the just extent of half its entire circumference at once. Had the sun itself been in a capacity on

this day to serve its natural use and purpose in lighting up the earth; yet if there was as yet no atmosphere to refract its rays, and to turn them inwardly in every direction on the earth; even the sun would not have produced its proper effect in illuminating the earth, until it had reached its culminating point, the point of noon.

We may conclude too that this alternate appearance and disappearance of light, which made the proper distinction between the parts of the noctidiurnal cycle on the first day, was repeated on the second day, and on the third also. We may collect also from the analogy of the first day, on which the proper beginning of the work of the day was determined to the proper beginning of the day also, 6 A. M. of mean time, that the beginning or the work of every other day, in all probability, was similarly determined to the same time of the day, 6 A. M.; though that is not a necessary consequence, nor in fact, as far as we can perceive, in every instance a matter of importance.

### SECTION III.—ii. *Double epoch of the noctidiurnal cycle.*

It may be objected to our assumptions that we reckon the noctidiurnal cycle from sunset, or 18 hours from midnight, and that we consider this to have been its proper and original rule; and yet that we reckon it from midnight also, in conformity to the Julian rule; professing to regard the cycle itself all the time as one and the same thing perpetually.

But to this objection we reply, that there is no inconsistency even in a double rule of the noctidiurnal reckoning, though one of these rules may be different from the other; provided both are not supposed to be in use at once, or if both are in use simultaneously, provided both are not supposed to be applied to the same cycle, or to the same succession of cycles perpetually, at once. The noctidiurnal cycle, in the sense in which we use these terms, cannot be distinguished from the period of 24 hours; and no one surely will maintain that a given succession of periods of 24 hours might not be reckoned from any epoch; and any number of such successions, each from a proper epoch of its own; and that all might not be going on as so reckoned in conjunction too; yet each without interfering with the rest.

The true answer to this objection however is that the noctidiurnal cycle is one thing in itself and as an individual measure of time, and another thing as an element which enters into the other measures of time distinct from itself, the menstrual and the annnal. Its proper epoch, in the former capacity, is sunset or 18 hours from midnight. Its proper epoch, as mixed up with the annual measure of time, is that of this annual cycle: and that is the mean vernal equinox. The noctidiurnal cycle therefore, as mixed up with the annual from the first, must bear date from the point of the mean vernal equinox.

There is no necessary connection between the point of the mean vernal equinox and any one point of the noctidiurnal revolution, more than another: but, if the case was so ordered by the appointment of the Creator at first, that the actual commencement of annual time in connection with the present system of things bore date from the point of the mean vernal equinox and from the point of midnight also, then nature itself must be said to have prescribed this double rule of the reckoning of the noctidiurnal cycle even from the first.

The first actual revolution of the earth about its own axis, in connection with the present system of things, having begun at sunset or at 18 hours from midnight, this would be the proper epoch of the noctidiurnal cycle, and of the period of 24 hours commensurable with it, ever after. The first actual mean vernal ingress, the first mean vernal equinox for the proper meridian, having taken place six hours later, i. e. at midnight, this would be the proper epoch both of the noctidiurnal cycle and of the period of 24 hours, as mixed up from the first with the annual cycle. The former would be the primitive rule; the latter, agreeable to the Julian: the former, an actual rule from the first; the latter, virtually so even from the first, and in the course of time destined to become actual as much as the former. To this subject however we shall have occasion to return hereafter.

SECTION IV.—iii. *The annual cycle of the Fasti dated from the first day of the hexaëmeron; yet the sun itself not visible before the fourth.*

It may be objected to the principles and arrangements of our system of time that the solar cycle of our Fasti, the natural measure of time which we call the annual cycle, is dated from the first day of the hexaëmeron; and yet that Scripture would appear to restrict it to the fourth; if the sun at least was not yet in existence, or was not yet visible, before the fourth.

It must be admitted, in simple and unhesitating deference to the Mosaic account of the creation, that the sun did not become visible before the fourth day of the hexaëmeron. Thus much we are bound to admit; and thus much we are willing to admit to the fullest extent. But whether the appearance of the sun for the first time on the fourth day is a proof that the sun was not in existence, and not merely not yet visible, before that day; that is a totally different question. There is no necessary foundation for this further inference, in the simple fact of the appearance of the sun for the first time on this day: and if the earth was actually in existence before the fourth day, (of which no one can doubt,) that must do much to prove that the sun also must have been in existence before the fourth day: for the earth and the sun are so connected together, and are so related one to the other, that it is scarcely possible to conceive the existence of one of them apart from that of the other; especially the existence of the earth and not that of the sun also. We might perhaps conceive the sun to be already in existence, and yet not necessarily the earth; but we can scarcely imagine the existence of the earth, and yet not that of the sun.

If however both the earth and the sun had an actual existence on the first day of the hexaëmeron, then there is no reason whatsoever to suppose that the beginning of annual time, in connection with the present system of things, must have borne date only from the fourth day of the hexaëmeron, because the sun became visible for the first time only *on* that day. No proposition in physical astronomy is more undeniable than *this;* That the revolution of the earth about

the sun, (which is what we mean when we speak of the *year* or of the annual cycle,) has nothing whatsoever to do with the visibility or the invisibility of the sun itself. There may be differences of opinion among men of science about the nature of light and heat, and about the manner in which both are connected at present with the sun, and both are dependent on the sun; but there can be none we apprehend on *this* point, That though neither light nor heat *de facto* proceeded from the sun, yet while the mass of the sun and the mass of the earth respectively continued the same, while the law of attraction, and whatsoever else it is which conspires with that to determine and govern the revolution of secondary bodies in the solar system around their primary one, continued to operate in the same way, the circulation of the earth about the sun, once begun, might continue to go on, and annual time, from a given point in its orbit to the same again, might continue to be measured, in the same way.

There is no real difficulty then in this seeming anomaly of the first appearance of the sun three days after annual time, in connection with our own system, had actually begun. The case of the first three days of the hexaëmeron was peculiar; but not so in any respect which made any real difference to the constant reckoning either of noctidiurnal time or of annual. They had every thing necessary to constitute days, albeit not through the instrumentality of the sun; and if they must enter the reckoning of noctidiurnal time as perfect and complete parts of that succession, they cannot be excluded from that of annual: for there never yet was a cycle of the former kind which did not find its proper place, either wholly or in part, in a cycle of the latter kind. It will be seen hereafter that the first actual cycle of annual time dated from the first mean vernal equinox, in connection with our system, bears date from midnight on the first of the days of the hexaëmeron: and that must be demonstrative proof that the actual revolution of the earth around the sun was going on three days before the actual appearance of the sun.

The truth is, (as we have already observed,) that the Mosaic creation was not the absolute commencement of any one of the measures of time. It might be so, or rather it must have been so, relatively to *us*; but it was not so in it-

self. There is no reason therefore to suppose that any one measure of time, which was going on before the Mosaic creation, was suspended or interrupted, much less changed, by the Mosaic creation itself. But this too is a point on which we shall have occasion to say more hereafter.

SECTION V. iv.—*The lunar cycle of the Fasti dated from the sixth day of the hexaëmeron, yet the moon produced or made visible on the fourth.*

It may be objected to our assumptions that the epoch of the lunar cycle of our Fasti, (that is of the perpetual reckoning of true mean lunar time, as we suppose, embodied therein,) is the sixth day of the hexaëmeron, dated from sunset or 18 hours from midnight, according to the primitive rule; and yet the moon itself was either first produced or first made visible on the fourth. And for this objection there would seem to be *a priori* a better foundation than for any other which has yet been mentioned; for neither of these facts can be denied; and yet at first sight they appear to be inconsistent.

The work of the fourth day of the week of creation, whatsoever that was, according to Scripture, was confined to the sun and to the moon; and must be so understood. The stars indeed are mentioned also[f], as if they too in some manner or other were included in the operation of this day; but the meaning and reference of that allusion is doubtful, and we may possibly have occasion to consider it again hereafter. With regard however to the proper work of this day, as supposed to be restricted to the sun and to the moon; it cannot be necessarily collected from the Mosaic account that either of them was brought into being on that day. It can be collected with certainty only that both of them *appeared* for the first time on the fourth day, just as, under similar circumstances, they have been seen to *appear* ever since; from which fact the inference is both just and inevitable, that neither of them had so *appeared* in the course of this week until then.

And though Scripture is silent about the precise time and manner of this first appearance of either, we hope it is neither presumptuous nor unreasonable to conjecture, or even to

[f] Gen. i. 16.

assume, that the time and the mode of the first appearance of the sun in particular on this occasion was the usual time and the usual manner at which and in which it has always been seen to appear in the morning, for a given meridian, *three* days after the vernal equinox: which on this particular occasion, and as referred to the meridian of the ancient Jerusalem, would not be more than five or six minutes of mean time before the proper beginning of the equinoctial day, 6 A. M.; the same time in all probability on the morning of this fourth day, at which, (had there been a visible sun to rise on the morning of the first day, and an atmosphere to refract the rays of that sun, and to elevate the disc of that sun before it was actually above the horizon,) it would have appeared to be rising even on the morning of the first day*.

But with respect to the moon, and to the actual time and mode of the first visible appearance of that luminary also; chronologers both ancient and modern have generally taken it for granted that the moon was either first created, or first made to appear, in a state of conjunction or in a state of opposition: i. e. either at the *new* or at the *full*. Nor can it be denied that *prima facie* this would perhaps be the most natural and obvious apprehension of the state of the case. Yet on reflection it would be difficult to say what necessary foundation there could be for this supposition; or why the moon might not be created, or made to appear, in any state of the phasis as much as in that of the full; or at any period of the synodic revolution as much as at that of the conjunction. It is evident that a question like this could never be decided by presumptions of this kind; that is by mere considerations *a priori* or reasons of probability. It is a question of *fact;* and like all questions of fact it must be determined by testimony and testimony only: by the testimony of Scripture, if that is to be had; by the testimony of astronomy, that is by actual calculation, to supply the absence of Scriptural testimony to the fact, if that is wanting.

Now the fourth day of the hexaëmeron, under every con-

* It is found upon calculation that for the latitude of Jerusalem and under ordinary circumstances, true sunrise on the morning of April 28 B. C. 4004 would have been about 5 h. 56 m. 51 sec. A. M. apparent time; about 5 h. 54 m. 41 sec. mean time. Refraction would make a difference of about 2 m. 12 sec. in anticipation.

ceivable state of this first manifestation of the moon, being still the only authentic and credible date of that first appearance itself; the inference which we draw from this fact is that this first appearance could not have coincided with the full. For if the moon first appeared at the full, it must have appeared first in the *evening*, *rising* as the sun was *setting*. Now *sunset* on the *fourth* day, according to the primitive rule of the noctidiurnal cycle, (the rule of Scripture, the rule which is strictly observed in the reckoning of every day in this week of creation,) must have been considered and represented as the *evening* of the *fifth* day. So that on this principle the actual date of the first manifestation of the moon, in the style of Scripture, and in the continuous reckoning of all the days of this week according to the same rule, must have been the fifth day, not the fourth. This argument it appears to us is decisive that the moon was not made to appear first in the state of opposition; that is, at the full.

And with respect to the other hypothesis of its being first made to appear in the state of conjunction; if we will only submit our opinions and judgments on this question, as it concerns the moon as much as the sun, to the guidance and direction of Scripture, instead of being influenced by our own prepossessions and prejudices; we shall see reason to conclude that the state of the conjunction is as much excluded by the circumstances of this first manifestation, as that of the opposition.

We must infer from the testimony of Scripture, plainly and literally understood, that the moon was made to appear on this first occasion in a *visible* state; but at the conjunction the moon is not and cannot be visible. We do not argue simply that if it *appeared* at all, in the strict sense of that word, it must have been visible at the time: nor do we insist, as we might if we pleased, that the question is either that of the moon's having been first *created* on this day, in the strictest sense of the word, or that of its having first *appeared* on this day, in the sense of first becoming visible upon it; so that, if the former was not the case on this day in particular, the latter must have been so. We are content to waive this particular argument for the decision of the present question; and still we may contend that, according to the description of the circumstances of the first appearance of

the moon on this day, given in scripture or reasonably to be collected from the language of Scripture, it could not have been *dark;* it must have been more or less possessed of light, and consequently more or less visible.

"And God said, Let there be LIGHTS in the firmament of the heaven, to divide the day from the night ... and let them be for LIGHTS in the firmament of the heaven to give LIGHT upon the earth: and it was so. And God made two great LIGHTS, the greater LIGHT to rule the day, and the lesser LIGHT to rule the night...and God set them in the firmament of the heaven, to give LIGHT upon the earth, and to rule over the day and over the night, and to divide the LIGHT from the darkness[a]."

If this representation was intended to apply to the moon as well as to the sun, and to be as true of the former at the time and under the circumstances of this first manifestation as of the latter; then it appears to us only a necessary inference from it that the name and description of a luminary, of a *luminous* body, at the time, (which must be what Scripture intends here by a *light,*) were just as applicable to the moon, in its proper place and in its proper degree, as to the sun. If the sun was a luminous body at this very time, so was the moon: if the sun was actually to be seen giving light at this very time, so must the moon have been seen to be giving light, to some extent or other, too. In a word, if this description implies that the sun was thus set in the firmament on this occasion, for the first time, in the actual discharge of its proper office and functions as the source of light to the earth; so must it imply that the moon was so too, in the discharge of its own office in relation to the earth, as the dispenser of light to it also, in a certain proportion and to a certain extent, as much as the sun. We must infer then from the terms of this description, as applicable to the moon as well as to the sun, that the moon must have appeared on this first occasion more or less endued with light, that is, more or less illuminated: from which fact it necessarily follows that it was not at this time in a state of conjunction with the sun.

In what state then it may be demanded must it be sup-

[a] Gen. i. 14—18.

posed to have been? The answer to this question, as we have observed, is to be obtained either from testimony or from calculation. Testimony, it appears, the testimony of Holy Writ, determines it only within certain limits; as neither the state of the opposition nor the state of the conjunction, and consequently as some state between the two; but what, it has left indefinite. The ultimate decision of the question then must be left to calculation; or, (what amounts to the same thing in the end,) to the uninterrupted representation of actual lunar time itself, according to one and the same law, and that the natural law of the succession from first to last.

This perpetual representation of the course and succession of lunar time is exhibited in the lunar cycle of our tables; and to that we refer our readers at present. With respect to the test of calculation, doubts might very reasonably be entertained with regard to the degree of reliance which might be placed on calculations carried so far back as B. C. 4004; the object of which too was to determine the state of the lunar momenta on a particular day in that year; though these are confessedly among the most difficult and the most uncertain with which astronomy has to deal. We do not hesitate however to affirm that calculation will never determine the lunar conjunction of April B. C. 4004, for the proper meridian, in a manner at variance with the conclusion to which we have come; viz. that the moon was neither in a state of opposition nor in a state of conjunction on the fourth day of the hexaëmeron, but in a certain state between the two; and that the more exact the calculation itself, and the more to be depended on, the more certainly will the date of the primary lunar conjunction for the proper meridian be determined to the fifth day of the hexaëmeron, not to the fourth: proofs of which we hope to produce hereafter.

The inference therefore, suggested by the simple and natural construction of the language of Scripture itself, that the date of the lunar conjunction in the week of the hexaëmeron could not have been the morning of the fourth day, would thus be found to be confirmed by calculation: and if we may assume, (as we have done in our general lunar tables,) that the actual date of this primary conjunction was

the evening of the sixth day, reckoned according to the primitive rule, the evening of the fifth day according to the Julian rule, April 29 at 18 hours from midnight; then the true age of the moon on the morning of the fourth day could not have been less than 28 days of mean time; and this being 36 hours before the end of the mean synodic revolution, it is the ordinary age of the moon at the time of the last phasis; the age of the moon under ordinary circumstances, when it is visible for the last time in the morning, rising before the sun.

We conclude then that the actual state of the manifestation of the moon, on this first occasion and on the fourth day of the hexaëmeron, was that of the last phasis. At least it may reasonably be assumed, that if the moon was actually in conjunction with the sun any time on the fifth day, not earlier than noon, in such a state of the air as that of paradise and for such a climate as that of paradise, it must still have been visible not long before 6 A. M. on the morning of the fourth day, 30 hours at least before the conjunction. The exact moment indeed of the actual appearance of the moon on this morning would be that of the appearance of the sun: and if this was about 5 h. 57 m. apparent time, as we concluded, so must the former also have been. But the moon, being 36 h. at this time distant from the conjunction, would be 20° or 21° higher up in the sky than the sun: so that if the latter was rising on this morning cir. 5h. 57m., the former by mean motion must have been rising cir. 4h. 37m. A. M.; i. e. about 1h. and 20m. before it became actually visible.

SECTION VI.—*On the probable reasons why the primary epoch of lunar time was appointed to bear date not from the conjunction, but from a certain length of time, not less than a day, before the conjunction.*

The matter of fact, that is, the actual date of the first appearance of the moon on the morning of the fourth day of the hexaëmeron, is one thing; the reason or reasons of the fact are another. We are properly concerned only with the former. As to the latter, to inquire into them as if we were competent to discover them, or as if we were entitled to judge of them, would be presumptuous in the highest degree.

If we ourselves then venture to offer any conjectures on this subject, we wish them to be received as conjectures merely; and as conjectures both conceived and proposed with an entire and absolute conviction both of the wisdom and of the fitness of every matter of fact connected with the week of creation, which inquiries conducted in the proper spirit may contribute to bring to light; whether it be such as to carry along with itself the evidence of such wisdom and fitness to *our* own apprehensions, or not. Inquiry indeed into any of the Divine dispensations, which proposes to ascertain only the simple matter of fact, or what the Divine will in a given instance has been pleased to ordain and appoint, does not appear to be forbidden. It is culpable only when it leads us to criticise the Divine proceedings; and to set up ourselves as judges and censors of the acts of God: instead of at once acquiescing in the conclusion that, when inquiry has done its office, whatsoever it has brought to light, as clearly and indisputably the effect of the Divine appointment, for that very reason must be considered both wisest and best.

One reason then for this peculiar economy relating to the moon may have been the fact which we have already collected from Scripture; That as the moon was intended to be the ruling luminary of the night, as the sun was to be that of the day; it might be only consistent with that destination that the moon should make its appearance on this first occasion in possession of light, as well as the sun, yet still in the night time rather than in the day: a combination of circumstances which would require the appearance of both together, as nearly as possible at the point of sunrise: and therefore that of the moon in particular in the state of the last phasis, in which under ordinary circumstances it is still visible, rising in the morning twilight, and asserting its relation to and its jurisdiction over the night for the last time, before its final disappearance preliminary to the conjunction.

Another reason might be that the first actual appearance of the new moon, after the first true conjunction next in course, might coincide with the evening of the day on which man was created, the evening of the sixth day according to the Julian rule, the evening of the seventh according to the primitive; or at least with the evening next to that. Had

the moon been called into being in a state of conjunction on the morning of the fourth day; the phasis in all probability must have been looked for on the evening of the fifth day—*before* the creation of man. But if the first conjunction took place at evening on the fifth day, (which we apprehend to have been the case,) the phasis of this moon, it is to be supposed, would take place if not 24 hours afterwards at sunset on the sixth day, yet 48 hours afterwards, at sunset on the seventh day: in which case, it would not be prior to the creation of man; and lunar time, in constant connection with the present system of things, even as the subject of human observation, would not be older than human existence. And, if we are not mistaken, proofs of this coincidence are actually discoverable, and we may have occasion to produce them hereafter; from which it will appear that the traditionary epoch of lunar time, in constant connection with the present system of things and with human existence from the first, was the luna tertia; the third day after the creation of man, reckoned according to the primitive rule from sunset.

A third reason, and, (if we may be permitted to express our own opinion on this point without appearing presumptuous,) perhaps the most likely of all to have been the true reason, is to be sought for in two facts, both still future and to any thing but Omniscience still inscrutable, but to the Divine mind even then as good as present: one, the anomaly which would sometime be introduced into the course and succession of lunar time by the two miracles affecting the sun; the other, the restitution of all the measures of time (the lunar as well as the rest) to the same relations at the birth of Jesus Christ as at the beginning of the present system of things.

For the fact, as we shall see hereafter, turns out to be that exactly 4000 years after the date of the Mosaic creation, A. M. 1, B. C. 4004, and consequently A. M. 4001, B. C. 4, all the mean measures of time, the noctidiurnal, the hebdomadal, the menstrual, and the annual, came round to the very same state in themselves, and to the very same relations to each other, in which they set out in conjunction in the week of the Mosaic creation. It is capable of proof too,

(and we ourselves consider that we have proved it even in our former works,) that the year distinguished by this restitution, A. M. 4001, B. C. 4, was the true year of the birth of our Lord and only Saviour Jesus Christ.

The mere statement of these facts is a proof that they were connected; since nothing in a case of this kind can possibly be ascribed to chance. There was a necessity then for this coincidence; that is, that the measures of time should return to their original relations at the epoch of the Nativity; and that the epoch of the Nativity so far should be the counterpart of that of the Mosaic creation. If this however was the case; then, in the fact of this necessity and in that of the miracles, both present to the Divine apprehension of the future at this time and at once, (with humility be it spoken,) we have all the explanation which seems to be necessary of the peculiar economy of the fourth day of the hexaëmeron, relating to the moon.

Had the moon been in conjunction on the morning or in the evening of the fourth day; then, if the two miracles were still to take place at the proper time and still to produce the same effect, it would not have been possible for lunar time to return to the same relations to every other description of time in the week of the Nativity, from which it set out in the week of creation. It must have been found anticipating 24 hours upon them. As it was, each of the miracles might take place in its proper order of time, and each might produce its proper effect; and yet this restitution of lunar time to its original relations in the week of the Nativity would take place too. Nay more, it would be proved by the event that the very anomaly, produced by those miracles on the reckoning of lunar time in particular before and after, would be the means of bringing about the coincidence itself; and that lunar time, reckoned continually from the evening of the fifth day of the hexaëmeron down to the week of the Nativity, including this anomaly, would be the same thing in effect as lunar time, similarly reckoned from the evening of the sixth day, exclusive of any such anomaly, would otherwise have been.

We may presume then that this particular state of the case, with respect to the first appearance of the moon and

to the proper epoch of lunar time in the week of creation, was forecast with reference to these two things, (each of them humanly speaking contingent and future, but to the Divine apprehension, even then, an absolute certainty and a present reality,) the birth of Jesus Christ, and the coincidences by which it must be distinguished in the return of the natural measures of time to their first principles, and to their original relations to each other; and yet the two miracles also, in the time of Joshua and of Hezekiah respectively, and the anomaly which these would produce on the lunar measure of time in particular.

### SECTION VII.—v. *The lunar standard of the Fasti not one which astronomers have recognised or adopted.*

It may be objected also to this part of our system of time that the mean standard, on which the lunar cycle of our Fasti is based, has not been recognised in theory, or adopted in practice, by any astronomer, ancient or modern.

The truth of the fact so objected in general must be admitted. Among the particular lunar standards, ancient or modern, collected and proposed in a former part of our work[g], the particular standard of our own Fasti is not to be found in *terms*. And yet there are some among them, (especially among those which are adopted at present,) which differ only slightly from it: and to say it has never been known, nor recognised, in any shape, if the period of 304 years, on which it is founded and from which it has been obtained, has long been familiar to astronomers or chronologers, would not be true.

In answer however to this objection in general we reply, that a fixed and invariable lunar standard, which shall always be true and always real, is an impossibility. It may be conceivable in theory, but it can never be realized in practice. It is the law of the lunar momenta that they must go through a constant cycle of change and alternation, one the reverse of the other, though one always proportional to the other; in other words, that they must always be either constantly accelerated or constantly retarded. The operation

[g] Diss. ii. chap. ii. sect. iii and iv. vol. i. p. 67. 69.

of this law at present, (and in fact ever since the beginning of the existing system of things, and long before its beginning too,) is a still continuing process of acceleration, which has not yet arrived at the point when it must begin to be reversed; and to be succeeded by a contrary process of retardation.

It is self-evident therefore that there neither is nor can be an invariable standard of the mean lunar motions; a standard which shall always represent the truth. Astronomers are agreed upon this point: and therefore the standards which they propose are put forth only as those which hold good at a given time; but in the course of time will require to be revised and corrected: and in general they assume and propose them as true only from century to century. All that they do beyond this is to supply us with rules and formulæ, (the result of theory and observation in combination,) by means of which the standards of past times may be recovered, within certain limits of exactness, from those which hold good at present; or the standards of future times, within the same degree of correctness, may be anticipated from those of the present.

An assumed mean lunar standard, under these circumstances, must either begin with being positive, or end with being so. It cannot always be the actual standard; or that which the necessity of the case requires. Now for the reckoning of lunar time according to one and the same rule, (and that a cyclical rule,) a fixed standard is indispensable. And the question is or should be only on what principle this is to be determined. If lunar time is to be reckoned perpetually in conjunction with solar in the sense of Julian; it can be determined on one principle only. There is but one cyclical rule of lunar time which will perpetually answer the purpose of such a reckoning in conjunction with Julian; and that is the rule of the Metonic cycle. The proper standard of this cycle therefore is the proper one of our Fasti: and when we speak of this cycle, we mean the period of 304 years, into which it enters a certain number of times completely.

And yet this standard, for any thing which can be alleged to the contrary, may be the true abstract idea and represen-

tative of the mean lunar standard itself; as far as such an abstraction is capable of being realized in an actual standard and at a given time. Though the actual lunar standard is constantly varying, it has its limits. Nature has prescribed both its maximum and its minimum. It must go on decreasing until it reaches the latter; and then it must begin to increase, and must go on increasing until it attains to the former: and this cycle, for any thing which appears to be known to the contrary, is destined to be of perpetual iteration and recurrence. Under these circumstances, if there be such a thing in *rerum natura* as a mean lunar standard, and consequently an invariable quantity of that kind, it must be something as much greater than the actual standard when it reaches its minimum as less than it when it arrives at its maximum.

It seems to be agreed upon among astronomers that the true cause of this liability of the mean lunar momenta to vary perpetually is the variability of the excentricity of the solar orbit; that while that excentricity continues to be diminished the velocity of these momenta must continue to be increased; and that, when the former begins to increase again, the latter also will begin to be retarded. It is agreed also that the excentricity has been constantly decreasing for a much longer interval of time than that which measures the duration of the Mosaic creation; and it appears to be agreed too that it must still go on decreasing for thousands of years before it will arrive at the point when it must cease to be diminished any longer; and instead of that must begin to increase again.

Now, supposing the actual mean lunar standard of A. D. 1801 to be correctly represented by the quantity,

29 d. 12 h. 44 m. 2 s. 865,537,6.

then the formula,

$$\pm\ 0\,s \cdot 034{,}136.\ \kappa.$$
$$-\ 0\,s \cdot 000{,}092{,}45 \cdot \kappa^2\ *,$$

* This formula, for the secular correction of the mean synodic period, is mathematically deducible from Damoiseau's formula for the secular correction of the mean motion of the moon. We are indebted for it and for the rule of its application to professor Challis, of the Observatory in the University of Cambridge.

in which $\kappa$ stands for any number of centuries before or after A. D. 1801, will enable us to recover the actual mean standard at any distance of time, measured by centuries, before A. D. 1801, or to anticipate the actual mean standard at any distance of time similarly measured, after A. D. 1801: the formula serving as a correction of the actual mean standard of A. D. 1801, to adapt it to that of any time proposed, before or after; by being added to it in the former case, and by being subtracted from it in the latter; the term containing $\kappa$ being *positive* for any epoch *before* 1801, *negative* for any *after* it; the term containing $\kappa^2$ being negative in either case alike.

Let it be proposed then, by means of this formula, to obtain the mean standard of B. C. 4004, from that of A. D. 1801. In this case, $\kappa$=58·04 centuries, and $\kappa^2$=3368·6416. Hence,

$$+0\,s\cdot034\cdot136\times\kappa = +1\,s\cdot981{,}253{,}44$$
$$-0\,s\cdot000{,}092{,}45\times\kappa^2 = -\quad 311{,}430{,}915{,}920$$
$$+1\,s\cdot669{,}822{,}524{,}080$$

Consequently,

| | d. | h. | m. | sec. |
|---|---|---|---|---|
| Mean standard of A.D. 1801 | 29 | 12 | 44 | 2·865,537,6 |
| Correction, 58·04 centuries | | | | + 1·669,822,524,080 |
| Standard of B. C. 4004 | 29 | 12 | 44 | 4·535,360,124,080 |
| Standard of the Fasti | 29 | 12 | 44 | 2·553,191,489,362 |
| Difference of standards, B.C. 4004 | | | | 1·982,168,634,718 |

This may give us something like an idea of the actual proportion of the assumed mean standard of our Fasti, (which is fixed and invariable,) to the probably true mean standard of B. C. 4004, at the beginning of our tables; though perhaps not even the astronomers themselves would undertake to assure us that, for so great a distance of time back as 58 centuries, the accuracy of the above formula is to be implicitly depended on.

With regard to any future mean standard of this kind; the excentricity of the solar orbit, Jan. 1 N. S. A. D. 1801, was estimated by astronomers[h] at 0·016,783,568, in parts of

[h] Collection of Tables and Formulæ, of the late Francis Baily, esq. p. 19. Page 270 of the same work, at mean noon the same day, according to Bessel, it was,

0·016,791,822,6.

Cf. Pontécoulant, Précis d'Astronomie, § 39. i. p. 130: 132.

the semiaxis major; and the rate of the secular diminution at 0·000,041,63: from which it would follow that, supposing this rate of diminution to be constant, 400 centuries or 40,000 years at least must elapse, before it can even approximate to a minimum. For 0·000,041,63 × 400 = 0·016,652. Consequently the excentricity, Jan. 1 A. D. 1801 being assumed at

| | |
|---|---|
| | 0·016,783,568 |
| Subtract | 0·016,652 |
| A. D. 41,801 the eccentricity will be | 0·000,131,568. |

To judge then of the probable magnitude of the actual mean lunar standard at this time, we must make $\kappa = 400$ centuries, and $\kappa^2 = 160,000$. Hence

| | |
|---|---|
| 0 s·034,136 × 400 | = − 13 s·654,4 |
| − 0 s·000,092,45 × 160,000 | − 14 s·792 |
| | − 28 s·446,4 |

Hence

| | d. | h. | m. | sec. |
|---|---|---|---|---|
| Standard of A. D. 1801 .......... | 29 | 12 | 44 | 2·865,537,6 |
| Correction, 400 centuries ........ | | | | − 28·446,4 |
| Standard of A. D. 41,801 ........ | 29 | 12 | 43 | 34·419,137,6 |
| Standard of Fasti ................ | 29 | 12 | 44 | 2·553,191,5 |
| Difference of standards A. D. 41,801 | | | | 28·134,053,9 |

And whether this should turn out to be the actual mean standard of so remote a period as that or not, still if *that* standard is destined to bear any tolerable degree of proportion to *this*, it is sufficient to shew that the fixed and invariable standard of our Fasti will some time or other exceed the actual one in a much greater degree than it has ever yet been exceeded by it, within the limits of human experience at least; and possibly will exceed it as much at last as it was ever exceeded by it: in which case it may have a right to be considered the true mean standard of nature, which remains the same under all changes of the actual; and is as much opposed to defect at one time as to excess at another.

Section VIII.—vi. *The mean standard of the natural year, assumed in our Fasti, not recognised nor adopted by astronomers.*

It may be objected in like manner that the mean standard of the natural or tropical year which we have assumed has not the sanction of any astronomer, ancient or modern; and

the truth of this objection, as to the fact itself, must be admitted. Among the ancient and modern standards of this kind, which we collected from various quarters, and proposed in a former part of our work[i], the particular standard of our tables does not appear. Yet it is still the case, that there are some in that list which differ only slightly from our own: one of La Lande's—365 d. 5 h. 48 m. 50 sec.; and Delambre's, 365 d. 5 h. 48 m. 51 sec. 36 th. But in a case of this kind a slight difference is a real and influential distinction; and any two standards, to be called and considered the same, should agree *in toto*.

With respect however to this objection in general; the same answer must be returned to it as to the last; Is there or is there not such a thing as the natural mean standard of the natural year itself? a standard which shall always be one and the same, and liable neither to excess at one time nor to defect at another? And if there is, what is it? and in what respect does it differ from that of our Fasti itself?

With regard to the standard *de facto*, or at a particular time; the enumeration and comparison of the largest collection of this kind both ancient and modern, (such as we ourselves to a certain extent have made and proposed,) proves nothing so certainly as *this fact*; That the standards assumed in ancient times were invariably different from those of modern times, and invariably greater too: and that, even when every allowance has been made which the nature of the case seems to require for the inaccuracy of the ancient determinations of this kind compared with modern, there still remains an excess which can be resolvable into nothing but an actual diminution in the length of the natural year itself—between the oldest of the ancient determinations of this kind, and the latest of the modern.

Astronomers indeed at present have not the means of instituting comparisons of this kind for more than 2000 years back; being destitute of data of an authentic description, supplied by actual observation and actual testimony, anterior to the time of Hipparchus. And as to deducing the length of the natural year at any distance of time back from theory; great as the perfection may be at which theory may be considered to have arrived in our time, yet La Place, Delambre,

[i] Diss. ii. chap. iii. sect. iii. vol. i. p. 75 sqq.

and the most profound and scientific astronomers of the present day, have been the first to express their distrust of conclusions obtained from theory alone, which go back even no further than 2000 years; much more of such as should go back 5 or 6000 years.

M. Biot however, in the latest edition of his Physical Astronomy, has proposed such determinations of the length of the natural year, deduced from the theory of the Mécanique céleste of La Place, for three different epochs, astronomically reckoned, B. C. 4250, B. C. 250, and B. C. 128 respectively[j]. According to these, at the first of these epochs, the actual length of the natural year was to be assumed at

365 d·2426; or
365 d. 5 h. 49 m. 20 s·64; or
365 d. 5 h. 49 m. 20 s. 38 th. 24 fourths.

At the second, at

365 d·2424; or
365 d. 5 h. 49 m. 3 s·36; or
365 d. 5 h. 49 m. 3 s. 21 th. 36 fourths.

At the third, at

365 d·242392; or
365 d. 5 h. 49 m. 2 s·6688; or
365 d. 5 h. 49 m. 2 s. 40 th. 7 f. 40 f. 48 sixths.

And this last is proposed as the true standard of the natural year in the time of Hipparchus; which Hipparchus himself, at this very time, (from observation, though no doubt inaccurate observation,) estimated at

365 d·246667[k]; or
365 d. 5 h. 55 m. 12 s·0288; or
365 d. 5 h. 55 m. 12 s. 1 th. 43 f. 40 f. 48 sixths.

The standard which M. Biot himself adopts is that of Delambre,

365 d·242264; or
365 d. 5 h. 48 m. 51 s·6;

a standard obtained as he tells us with the greatest care, from the discussion of more than 1200 observations; each made with all the circumspection and precision of modern astronomy[l]. And yet this standard itself is beginning to be antiquated; that which astronomers appear to have preferred, since the

j Tome iv. 50. § 29. note.

k Biot, iv. ch. iii. § 26, 27. p. 45, 46: see our list too, supra, loc. cit.

l P. 48. § 28: cf. 63. § 43: 64. § 43.

beginning of the present century, being the standard of Bessel, the late illustrious astronomer of Koenigsberg, which is comparatively much less than Delambre's[m]:

365 d·24222013; or
365 d. 5 h. 48 m. 47 s·81.

It does not appear then that there can be such a thing as a mean and invariable standard of the natural year, which will always represent its *actual* length: or if there is such a standard in the abstract, it must be such an one as remaining the same in itself perpetually, amidst all the changes and fluctuations of the actual standard, will ultimately be found to exhibit an equal contrast to the extreme of defect at one time and to that of excess at another: for that the variations in the actual length of the year are either periodic, and liable to oscillate backwards and forwards in short periods of time, or secular, which go on increasing and decreasing also, though in proportionably longer intervals of time, alternately, astronomers seem to be agreed[n]. And in our opinion this fixed and immutable standard, of nature's own determination, alike opposed to excess and to defect, in this instance as much as in that which we considered last, is probably to be found in the standard of our Fasti.

We ground its claims to this character however not merely upon such considerations as these in the abstract; but on others of a much more obvious and intelligible kind, and more level to the common sense of any of our readers. One of these may be stated as follows. If there was any necessity that the mean standards of nature, by which time of every kind, annual as well as the rest, began to be measured at the epoch of the Mosaic creation, should return to their original relations at the epoch of the Nativity, exactly 4000 years afterwards; then the natural mean standard of annual time, the standard prescribed by this necessity, is that of our Fasti. With this standard, the restitution in question was capable of being effected, and at the necessary point of time; but with no other but that. For the evidence of the fact of the restitution itself, we refer to our general tables; desiring

m Astronomical Tables and Formulæ of Mr. Baily, Appendix p. 270: Pontécoulant, Précis d'Astronomie, tome i. p. 450, § 161.

n Biot, iv. p. 48. § 28.

our readers merely to compare A. M. 1, B. C. 4004, and A. M. 4001, B. C. 4, together. But substitute any other standard for that of the Fasti, exactly at the same point of time, A.M.1, B.C.4004; would the same restitution be possible, at the same time and in the same way, A. M. 4001, B. C. 4? We need not hesitate to answer that it would not. If then there was any necessity for this restitution, best known to the Author of time itself; the standard which brought it about must have been the standard of *his* appointment; that is the true mean standard of natural annual time itself.

Another argument to the same effect may be stated and explained as follows:

If the conjunction of annual civil time, in the form of Julian or of Gregorian, with natural annual time from the first, entered into the conception and plan of the scheme of time from the first also; then the standard of mean natural annual time, required and prescribed by the necessity of the case, on this principle also must have been that of our Fasti. It is not necessary for us to prove over again, for the satisfaction of any of our readers who has accompanied us thus far, that the Julian types of our Fasti are the true form of annual civil time perpetually accompanying, perpetually equated to, and perpetually substituted for, natural annual. Neither is it necessary for us to prove afresh that, as we call these types either Julian or Gregorian indifferently, so in reality they answer all along to the idea of both; and that at the proper point of time the same type of the Fasti passes both into the proper Julian and into the proper Gregorian at once.

It has often been shewn that the actual Gregorian standard of annual time in comparison of that of nature errs on the side of excess; though this excess itself has its limits. But the circumstance of distinction to which we wish to direct the attention of our readers is the fact, That of this error of excess, involved in the first principles of the actual Gregorian correction, the standard which supplies the corrective is that of our Fasti.

Few writers on the subject of astronomy have omitted to say something also concerning the Calendar; and few have been led by the course of their subject to treat of the calendar, and of the Gregorian correction of the calendar in par-

ticular, who have not taken occasion also to shew that the true standard of natural annual time, proposed by the authors of the Gregorian correction, the standard which would have met their views most completely, and have answered the end designed by the correction itself to the fullest extent and for the longest time, is that of our Fasti. The Gregorian standard is

365d·2425 ; or
365d·5 h. 49 m. 12 s.

That which the necessity of the case required, and which the principle of the correction itself, had it been fully realized, would have prescribed, was

365d·24225
365d·5 h. 48 m. 50 sec. 24 ths. [m]

In one word, the standard of our own Fasti.

It is easy to give our readers an idea of the distinction between these two standards, of which we are speaking; and of the different adaptation of each to the same object and end; the constant equation of civil annual time to natural annual time, or *vice versa*.

Let it be supposed then that, from the same necessity of which we have already made mention, civil annual time, having perpetually accompanied natural from the first, was bound to return to the same state, both in itself and in relation to natural annual time, at the end of 4000 years, in which it set out at the beginning. This necessity would be fully answered in the case of annual civil time both in itself and in relation to natural, if there were as many integral days and nights less in these 4000 civil years, perpetually equated to 4000 natural, as there are more in 4000 simple Julian years than in 4000 natural.

Now, on the principles of the Gregorian correction and strictly in conformity to the Gregorian rule of the correction, this would not be possible. In 4000 Gregorian years the Gregorian rule would require the suppression of only 30 days, at the rate of three days in 400 years; but the necessity of the case would require 31. The difference between 4000 Julian years of our Fasti and 4000 simple Julian years

[m] Cf. Pontécoulant, Précis d'Astronomie, tome i. § 161. p. 450–453. Also sir John Herschel's Outlines of Astronomy, part iv. ch. xviii. § 914, 915.

is just 31. The necessity therefore above alluded to, with the Gregorian standard of our Fasti, would be fully provided for; but not with the proper Gregorian. The former is consequently the true idea of such a standard; the idea proposed indeed from the first in the Gregorian correction, but only imperfectly realized by it.

| | | | |
|---|---|---|---|
| Mean Julian standard, | 365 d·25 | | 365 d·25 |
| Standard of the Fasti, | 365 d·24 225 | Gregorian standard, | 365 d·2425 |
| Difference, | 0 d·00775 | | 0 d·0075 |
| | 4000 years. | | 4000 |
| | 31 d·00000 | | 30·0000 |

In fact the annual difference between the mean natural standard of our Fasti and the mean Julian being 11 m. 9 sec. 36 th., 11 m. 9 sec.·6, or 0 d·00775, if we multiply this last by 129, it becomes 0 d·99975: which is only 0 d·00025, or 21 s. 36 th. less than an entire day, or one integral cycle of 24 hours of mean solar time. It follows that the difference between the mean natural standard of our Fasti and the mean Julian must accumulate to 24 hours of mean solar time, *minus* this small quantity of 21 sec. 36 th., in 129 mean natural years.

This period therefore of 129 natural years of the Fasti being assumed as the proper period of correction of the Julian or Gregorian (that is, the purely civil) type of our Fasti, in constant connection with natural annual time; so long as this small difference of 0 d·00025, or 21 sec. 36 ths. has not yet accumulated to an entire day, it is manifest that the civil annual time of such a scheme as ours might properly be permitted to go on in conjunction with natural annual, subject to one and the same rule of administration perpetually.

Now this outstanding difference at the end of every period of 129 years would accumulate to an entire day, or one integral period of 24 hours, only in 4000 periods of 129 years; that is, only in 516,000 natural years of our standard.

| | | |
|---|---|---|
| Defect in one period of 129 years, | 0 d·00025 | 129 years. |
| | 4000 | 4000. |
| Defect in 516,000 years, | 1 d·00000. | 516,000 years. |

The meaning of this too is that 516,000 Julian years of our Fasti, (and we may add natural years of our standard also,) would contain 3999 days less than 516,000 simple Julian years.

| | |
|---|---|
| Mean Julian year .. | 365 d·25 |
| Standard of the Fasti, | 365 d·24 225 |
| | 0 d·00 775 |
| | 516,000 years. |
| | 3999·00000 |

The same number of Gregorian years would contain 129 days more; for the annual difference between the Gregorian standard, and that of the Fasti, being 0 d·00025; in 4000 years, as we have seen, this amounts to *one* day; and therefore in 129 × 4000 or 516,000 years it must amount to 129 days.

It is evident therefore from the above, that the period of correction required by such a Gregorian standard as that of our Fasti, in order to the equation of true civil to true annual time perpetually, would not be less than 516,000 mean natural years: that one law, one rule, one system of administration would serve for the constant adjustment of annual civil to annual natural time, in a scheme like this of our Fasti, for 516,000 years: and that, even at the end of this great period, no new law, no fresh rule, no difference in the system of administration itself would be requisite; but only the suspension of the old law, of the former rule, of the proper system of administration until then. For all that would be necessary, under such circumstances, to restore the equality of civil annual time to natural as perfectly as ever, and to enable the former to begin and to proceed in conjunction with the latter in the same manner as at first, would be to continue the same type of the Fasti for two periods instead of one; for the 4001st period, as well as the 4000th.

When we have pointed out this property of the Gregorian standard of our system of time; we have pointed out every thing which can be necessary to demonstrate its sufficiency as the perpetual model and representative of true mean annual time. A system, which is calculated to go on subject to one and the same law of administration, without inter-

ruption, for 516,000 years, and then to correct itself, and to readjust itself, in order to begin and go on for another period of 516,000 years, merely by the suspension of its own proper rule of administration, and that too perpetually, must be perfect of its kind; and must ultimately repose on a foundation which has been laid by nature itself.

There is yet a third, and if possible a still more remarkable, property of the mean standard of the natural year, assumed in our Fasti. But as it derives this from its peculiar relation to mean sidereal time as well as to mean solar time, and sidereal time is a subject on which we have not yet entered; we reserve the explanation of this property for a future opportunity. There is also a fourth argument of the right of this standard to be considered the true mean standard of natural annual time, derivable from the traditionary testimony discoverable to this particular standard; a testimony which becomes only the clearer and more indubitable the nearer we can go back in our inquiries after it to the beginning of things itself; so as necessarily to lead to the inference that this must have been the standard of mean natural annual time, made known to mankind by the Author of nature from the first. But neither could we enter on the full explanation of this argument at present; nor until many preliminary questions have been discussed, and the premises have thereby been furnished which lead to this conclusion at last.

## CHAPTER II.

SECTION I.—vii. *The first cycle of leap year in the Julian reckoning of the Fasti an imperfect one; that is, a cycle of three years.*

It may be objected to the arrangements and details of the system of annual Julian time, which we exhibit in our tables, that though we profess to incorporate a proper reckoning of annual Julian time with that of annual natural time from the first, and though we profess to bring down the former in constant conjunction with the latter,

according to a rule of administration which is strictly and properly Julian; yet we contradict our professions at the very commencement of the process: we reckon the entire succession of Julian time from a certain day at midnight B. C. 4004, and nevertheless we admit a leap year and a leap day only three years afterwards, instead of four; viz. in B. C. 4001.

This is the greatest objection at first sight which has yet been brought against us: and it must consequently be answered if possible the more carefully and more completely. For that the matter of fact is as the objection states it to be, cannot be denied. The first cycle of leap year which enters our tables *is* a cycle of three years, not of four: but whether on that account it is an imperfect cycle—this is the question which we have to consider.

SECTION II.—*On the history of the Julian cycle of leap year, and on the concurrence of circumstances, humanly speaking accidental, but in reality providential, by which it appears to have been determined.*

No one requires to be told that for the Julian reckoning of annual time a cycle of leap year is indispensable; and for an uniform reckoning of that kind an uniform cycle of leap year. The least irregularity in this respect, a leap year more or a leap year less than the Julian rule requires and the Julian rule permits—and there is an end to the continuous reckoning of noctidiurnal or of annual time according to the Julian rule. The reckoning of both might continue to go on, even under such circumstances; but it would be no longer in conformity to the Julian rule of either.

To this necessity for a regular and uniform rule of the cycle it makes no difference how far back we go to find the head of the reckoning, or how far forward to find its termination. From the moment that it comes into existence, it must begin to be subject to this rule, and as long as it continues in existence it must still keep to this rule; or it will not be the Julian reckoning of time in either case. And though we speak of the Julian reckoning of noctidiurnal and annual time, as that which is first and properly to be understood as the subject of such a rule perpetually, we include

the Gregorian under the same denomination as the Julian, from which it differs only *per accidens*; and we consider it to be subject to the same necessity of an uniform cycle of leap year also.

The proper Julian reckoning has a proper cycle of this kind; and applied whether backwards or forwards that cycle is and must be invariable. Yet if we proceed to inquire into the time and the manner at which and in which this proper Julian rule came to be determined, and rendered thenceforwards fixed and immutable, we can come to one conclusion only concerning it; viz. That humanly speaking it may be said to have been the effect of contingent and fortuitous causes; and yet that it was the result of so many and of such distinct and independent coincidences, of a combination of circumstances, conspiring together to produce this one effect at last, so different from one another, and spread over so wide a surface of time, that we cannot fail to come to the conclusion also that it must have been providential. How long is the interval between the first conception of the idea of the Julian year in Egypt, and the time of Julius Cæsar! and what connection can be discovered at first sight between the Sothiacal period of the ancient Egyptians, and the Roman correction of the Dictator Cæsar? And yet, if we are not much mistaken, (as we hope to convince our readers by the simple statement of the order and process of things which issued out at last in the Julian correction and in the Julian rule of leap year,) if the Sothiacal correction of the primitive year had not taken place in Egypt in its proper order of time, the Julian correction in all probability would not have taken place at Rome.

We have already had occasion to explain that the Romans had a regular calendar of a certain kind, from as far back as the date of the Foundation itself; and still more so from the time of Numa Pompilius: a calendar introduced and established by Numa, and inferior to none of those of antiquity; a calendar as remarkable for the simplicity of its principles as for the ingenuity of its details, yet altogether different from that of Romulus, except in the nundinal cycle common to both: a calendar consequently adapted for perpetuity, and as competent to have answered its purpose in the time

of Cæsar as in that of Numa: one too which embodied the principle of the Julian correction itself 667 years before its actual date. This is understood, as soon as it is known that the εἰκοσιτετραετηρὶς of Numa was virtually the same thing as three cycles of the octaëteris; and contained the same number of leap years and the same number of days and nights as 24 Julian years.

The first body of decemvirs made a change in this calendar of Numa; and the fact of this decemviral correction of *his* calendar is as certain as that of its original institution by him. But this change affected only its details: it interfered with none of its principles. Numa left February the last of the months; that is, at the end of the year. The decemvirs made it the second; and so transferred it to the beginning. We owe to their correction consequently the present arrangement of the months in the Julian calendar; for there is very little reason to suppose that, if Cæsar had found February still the last of the months, he would purposely have made it the second.

There is no doubt however that by this correction of theirs, such as it was, the decemvirs were contravening the views and motives which had actuated Numa himself in fixing the details of his calendar. He had appointed February to be the last of the months, because he intended it also to be devoted to uses and purposes, that is, to rites and ceremonies, which in his judgment were so proper for no month in the year as the last: uses and purposes which connected it with the services of religion in memory of the dead, and constituted it the lustral, piacular, or parentalial month. By transposing the month itself to the beginning of the year, the decemvirs transferred these ceremonies too to the same time of the year; which was what Numa would not have done. But they also had a reason for doing this; which, whether sufficient in itself or not to justify what they did, is competent at least to acquit them from the charge of having done it without any reason at all.

This reason briefly stated was the following: viz. That February in their own calendar, in its proper capacity of the lustral and parentalial month, might answer to Anthesterion in the Attic calendar, and in the same capacity in that. An-

thesterion was this lustral month in the calendar of Solon; as February was in that of Numa: and Anthesterion was the second month in the calendar of Solon; and therefore the decemvirs made February the second in their own. In so doing they were certainly deferring more tò the authority of Solon than to that of Numa: but it should be remembered that they had just before been sent to Greece, on an errand the object of which shewed a predisposition on the part of the Romans of this time in general to pay such a deference; viz. to collect the laws of Solon or of the other legislators of the Greeks, and by those means to improve even the laws and constitutions of Numa. This decemviral correction then might be a departure from the principles of Numa, according to which he had adjusted the details of his calendar at first; but it was the first step, and a very important one, in preparing the way for the correction of Cæsar; and, without it, February would never have been the second month in the Julian calendar, nor December the last.

The most remarkable circumstance connected with this correction however is that in transposing February it transposed also the intercalary system of the calendar. Like every calendar which professes to be lunar as much as solar, the calendar of Numa at stated times required an intercalary month; and it had been provided by him with such a month, and under a name very probably invented and imposed by himself; that of Merkedonius, or Merkedinus: and the stated place of the introduction of this intercalary month at the proper time, according to the principle which seems to have regulated the administration and details of almost all the lunæsolar calendars of antiquity in this respect, (in the first instance at least,) was the end of the year.

In other instances of this kind however the intercalary month entered the calendar at the proper time as a distinct month; as the xiiith in the calendar reckoning of the months for the time being. But in the calendar of Numa it made a part of the xiith month. The Merkedonius never entered his calendar except as a part of his February. His Merkedonius was grafted upon his February. It took up the Terminalia in his calendar; the 23 of February, the vii kalendas Martias: so that February 24 in the intercalary years of his

cycle was the 1st of his Merkedonius; and February itself in such years had only 23 days, the Merkedonius had 28 or 27; the five first of which were always the five last days of February.

This intercalary system, peculiar as it was, being confined to the end of the year, and affecting the details of none of the months but February, the last in the year, and even those only at stated times; it was well adapted to work without confusion, and without disturbing the symmetry and proportions of the calendar in other respects in general. But to transpose it to the beginning of the year was to introduce novelty, if not disorder, into the details of the calendar, at the very beginning of its reckoning. The month of March at least could not fail to be affected by the change in a manner in which it had never been affected before. The decemvirs must have been aware of that; and yet they did not venture to alter the intercalary system of Numa; though it might have been easy to transpose February, and yet to leave the Merkedonius attached to December instead of February, and at the end of the year, as much as before.

We owe therefore to this decemviral correction the proper intercalary rule even of the Julian calendar. They left February, as they had found it, the intercalary month: and Cæsar having found it the intercalary month in his own time left it so still in his own correction. The regular intercalary term, both in the Pompilian and in the Decemviral calendar, was the vi kalendas Martias: and Cæsar retained it in the same capacity, only under the name of Bissex kalendas Martias, February 24 Roman repeated; from which was derived the Latin name of the leap-year in the Julian calendar itself, Bissextilis or Bissextile; i. e. such years as had this Bissex kalendas Martias.

If then there is any propriety in this Julian rule of intercalation, we owe it ultimately to the decemviral correction: though nothing of the kind could have been contemplated by it at the time. And there *is* a manifest propriety in this rule; especially in the constant reckoning of annual Julian along with natural annual time. For the latter is necessarily dated perpetually from the vernal equinox; and the vernal equinox has always fallen either in the Julian month of

April or in the Julian month of March: and, though it began with falling in April, yet in Cæsar's time it had long been falling in March; and, by virtue of the Gregorian rule of the administration of the calendar, so long as that continues in force, it must for ever be confined to the month of March. Under such circumstances, from what epoch could Julian time in conjunction with natural be reckoned perpetually with so much propriety as from the 1st of March? Every one must see that the natural epoch of the cycle of leap-year in the Julian calendar is March 1: and therefore the natural seat of the intercalary day is either the Bissex of February, according to the rule of Cæsar, or February 29 according to the modern rule: for this is a distinction which must be considered accidental and immaterial.

Now the decemviral correction was a regular calendar, quite as much so as that of Numa; and consequently it was as well adapted for perpetuity as his. It is certain however that in the course of time the Romans discarded this regular decemviral calendar, or rather the regular administration of this calendar; and suffered an irregular administration to be substituted in its stead. It is in our power to assign the time when they did this; and to divine the reason why they did it: and when the truth comes to be known upon this point, we doubt not it will appear a very remarkable phenomenon, on what slight and insufficient grounds (as we should consider them) so grave a change, and one so important to all the details of public and private life, as this renunciation of the regular for the irregular administration of the calendar, was determined upon. But let us not be astonished at any thing of this kind. Had this change never been made, (though for such reasons as these,) we should never have had the Julian correction. If 163 years' experience of the practical inconvenience of the new system of administration was scarcely sufficient to compel the Romans to apply some remedy to it at last; it is morally certain that having no such cogent motive, and being already provided with a calendar abundantly competent to answer its purpose, and consecrated by so long a prescription, they would never have thought of superseding it either by the Julian calendar or by any other. The most important step then towards the ulti-

mate introduction of the Julian correction, next to the first, (the decemviral innovation on the calendar of Numa such as that was,) was this transition from the regular to the irregular calendar, by whatsoever reasons produced.

It is another remarkable circumstance that, though Cæsar himself is said to have conceived the idea of correcting the calendar even before his election to the office of Pontifex Maximus; and though he was elected to that office in B. C. 63, immediately after his return from Bithynia, he never had an opportunity of effecting his purpose before the commencement of the civil wars in B. C. 49. And yet it is capable of proof that the object itself was steadily kept in view all the intermediate time; and that the administration of the calendar meanwhile also, as far as was possible, was studiously so directed as to prepare the way for it. There is good reason too to believe that before his visit to Egypt, (which was one of the consequences of the civil war,) even Cæsar himself had not formed the idea of the Julian correction properly so called. He had a correction in his mind, but one of a different kind; and, if we are not mistaken, one much more in conformity to what he had observed in Bithynia, (where he had spent some time at the court of Nicomedes, before he was elected Pontifex Maximus at Rome,) than to any thing else. If then he abandoned this idea at last for that of the Julian correction, it was in all probability because of what he had seen or of what he had learnt in Egypt.

The date of the Julian correction was B. C. 46; that is, the year of confusion, the last year of the irregular calendar, during which the process of the correction was actually going on, was circumscribed between Oct. 11 B.C. 47, and Dec. 30 B. C. 46; and the first kalends of January in the first year of the Julian æra were attached to Dec. 30 B. C. 46. It follows that the first Julian year was a leap year; that is, even the Julian correction bore date in the last year of the cycle of leap year, not in the first.

There can be no doubt that this must have been the effect of appointment; and yet it is so contrary to the reason of things, and to what might on every principle of probability have been expected *a priori*, that the fact itself in our opinion is one of the strongest grounds for concluding that the Ju-

lian reckoning was not supposed to be taking its rise for the first time, even when it did, as a new, a distinct, and an independent reckoning of its kind—but as a continuation of something of the same kind older than itself. What was more natural than that a strictly new and independent reckoning of this kind, (viz. Julian both in principle and in details,) should begin in the first year of its proper cycle of leap year? And what was the natural epoch of that cycle, in such a calendar as the Julian, but the kalends of March? How contrary to this natural expectation is the matter of fact; that it actually took its rise in the last year of its proper cycle! And yet how easy to have prevented that, had it not been done on purpose; by giving one day more to the year of confusion, and leaving every thing in the first Julian year, except the Bissex in February, just the same.

The best explanation of this anomaly is the fact that Cæsar passed eight or nine months in Egypt after the battle of Pharsalia, B. C. 48—47; and that in Egypt he would meet with a type of the Julian year, which the priests of that country could not fail to represent to him as known to and as possest by themselves from time immemorial; and as invested also from time immemorial with a religious or sacred character. There can be no question, (as we have already asserted[k], and as we hope in due time to demonstrate by means of the necessary proofs,) that the Egyptians were acquainted with the principle of the Julian year even from as early a date as B. C. 1848; and that in the time of Cæsar there was more than one form and one type of such a year actually in existence among them. But that particular type of such a year, to which we allude as both actually in existence and actually in possession of this religious and sacred character at this time, was the Sothiacal; that which came into being, along with the Sothiacal period, in B. C. 1350.

This calendar was strictly Julian. It had a proper cycle of leap year; and a double date of that cycle, July 22 in the leap years, July 21 in the common years, at first; July 21 in the former, July 20 in the latter, in the time of Cæsar. The only peculiarity about it was that it was not in common use. It was not the calendar of the country. It was confined to

[k] Supra, Diss. vii. ch. ii. sect. iii. vol. i. 552.

the temples and to the priests. The popular calendar always had been and still was the primitive equable one; circulating round this and its fixed Julian terms, July 22 and 21, or 21 and 20, perpetually; and by means of the interval, whether in Julian or in equable time, between one coincidence of the first of the primitive Thoth with these fixed Julian terms, and the next to that under the same circumstances as before, determining the measure or magnitude of the Sothiacal period itself.

This Sothiacal calendar then, the proper Julian calendar of Egypt, being thus the most ancient, the most sacred, and the most venerable, form of such a calendar any where known to exist in the time of Cæsar; it is no wonder that he determined to make it the standard of his own correction: and in particular to borrow from it the cycle of his leap year. In this way (but only in this) can we account satisfactorily for the phenomenon already adverted to; that the first year of the Julian correction was the last year of the Julian cycle of leap year. Cæsar did not think proper to disturb the old intercalary rule of the Roman calendar, by transferring the seat of the intercalary day from February to July, (at this time still called Quinctilis;) but he did what he could to accommodate it to the Egyptian; and in particular he took the cycle of leap year, even for the use of his own calendar, directly from the Egyptian. In this calendar B. C. 46 was the 327th cycle, dated on July 21, from the first, supposed to be dated July 22 B. C. 1350: and the old intercalary rule of the Roman calendar, accommodated to such a reckoning of the cycle as that, would require February B. C. 45 to be bissextile.

The Julian cycle of leap year then was ultimately derived from the Sothiacal. The first year of the former was the first of the latter. There was only an accidental difference between them; that the actual seat of the intercalary day in the one was in July, and in the other was in February: and that the one might so far seem to anticipate seven months on the other. Considered in this point of view, it is no longer surprising that even the first Julian year should have been leap year. It could not be otherwise; and every thing now appears not merely consistent, but necessary. On this prin-

ciple however even the Julian correction of Cæsar must be regarded as only a continuation of the Egyptian Sothiacal correction: and we are bound to conclude that, if the latter had not taken place in B. C. 1350, the former in all probability would not have come into existence in B. C. 45. So early then in the history of time, and so far back, did the Divine Providence begin to lay the foundation of the Julian calendar; and to prepare the way for its actual introduction into use in the time of Julius Cæsar.

### SECTION III.—*Difficulty connected with the first leap year of the Fasti. Statement of the case.*

But whether it was accident or design which so ordered the course of things and the appointments of Cæsar himself; the fact itself is indisputable, that the first actual cycle of leap year, in the actual Julian æra, bore date on the kalends of March U. C. 709; which answered at that time to Feb. 28 B. C. 45. We may therefore assume that the cycle of leap year in the Julian reckoning having been thus determined by circumstances to March 1 B. C. 45, it must be reckoned at intervals of four Julian years asunder, whether backwards or forwards, from March 1 B. C. 45, perpetually.

On this principle, if we go back from March 1 B. C. 45, year by year and cycle by cycle, we come at last to March 1 B. C. 4001; which stands at the distance of 989 cycles of four years from March 1 B. C. 45. And from this fact the inference is inevitable; viz. that if B. C. 45, *ex kalendis Martiis*, was the first year of one cycle of leap year according to the Julian rule, B. C. 4001, *ex kalendis Martiis*, according to the same rule, must have been the first of another.

This brings us at once to the difficulty which we have to explain. The whole of the system of time, exhibited in our tables from first to last, is based upon *one* assumption; viz. that the absolute commencement of time in all its measures, as connected with the present constitution and state of things, was April 25, reckoned according to the Julian rule from midnight, B. C. 4004. All the proofs by which that system is confirmed, whether the testimony of Scripture, or the relations of time to itself and to every thing else from first to last, or the civil calendar in all ages and all countries, or the

matter of fact and the evidence of our senses at the present day, and even the irregularity which has once, but only once, been permitted in what is otherwise the most regular and invariable thing in nature, the course and succession of time itself; all these proofs, we say, lead to this one conclusion, that the absolute epoch of this wonderful concatenation of things, (the entire and simultaneous comprehension of which, in all its complexity, exceeds the capacity of any but the Infinite Mind,) the *primum mobile*, the κέντρον κινήσεως, the *punctum saliens* of this grand movement *in antecedentia*, according to one rule of progression, and that the Julian perpetually, so far as mankind and their proper system of creation are concerned, finds its origination on April 25, the feria prima, and at the point of the mean vernal equinox, cyclically reckoned from midnight, B. C. 4004.

It follows that the first cycle of leap year being dated from March 1 B. C. 4004, the second would be dated from March 1 B. C. 4000; and yet it has been demonstrated that strictly in conformity to the Julian rule it must and could be dated from no epoch but March 1 B. C. 4001. And these two facts being laid together, one, that the first actual beginning of the reckoning of time, in connection with the present system of things, even according to the Julian rule cannot be dated earlier than April 25 B. C. 4004—the other, that the second actual cycle of leap year, in connection with the same reckoning and according to the same rule, cannot be dated later than March 1 B. C. 4001; we are involved apparently in a great dilemma; because these facts, as so stated and so compared together, appear to be almost *recta fronte* opposed to each other.

### Section IV.—*On the explanations of the difficulty which might be proposed.*

To attempt to escape from this dilemma by giving up either of the facts in the opposition and conflict of which it seems to consist, however desirable it might appear, would not be possible. We could not give up the fact that B. C. 4001 *ex kalendis Martiis* according to the Julian rule must have been the first year of a cycle of leap year, without giving up the fact that B. C. 45 *ex kalendis Martiis* was so

too. Are we then to give up the other; That the actual commencement of time, such as it exists at present, according to the Julian rule was April 25 at midnight B. C. 4004? What is to become in that case of the proofs by which this fact has been ascertained and confirmed? Is the sufficiency of those proofs to establish their proper conclusion dependent on this alternative; viz. whether the first cycle of leap year, according to the Julian reckoning of the system of time which thus came into being, expired in B. C. 4001 or in B. C. 4000? For if not, our confidence in the competency of those proofs will not be impaired even by the discovery that the first cycle of leap year, in the annual reckoning of the system according to the Julian rule itself, was a cycle of three years and not one of four; however contrary to the Julian rule of the cycle that may appear to be. We shall see that this is a discovery which does not affect the origin or continuation of the whole reckoning of the system itself, but merely the details of its first three years; and that possibly there might be something peculiar in these first three years, which might make a cycle of three years as proper in this instance, as one of four in every similar instance since.

A superficial view of the difficulty would perhaps suggest as the easiest way of escaping from it, that possibly we might have been mistaken in our conclusion that B. C. 4004 was the true A. M. 1; and that the first actual beginning of time in connection with the present system of things was more probably B. C. 4005. And this being assumed, all difficulty and even appearance of difficulty, so far as the Julian reckoning of time and of the cycle of leap year ever after are concerned, would vanish at once; for B. C. 4005 being supposed to be the first year of the first cycle of leap year, B. C. 4001 would be the first year of the second, as matter of course.

A superficial observation might suggest this explanation; and the explanation itself would derive a colour of probability from the seemingly slight difference between the supposed date B. C. 4004 and the true date, on this principle, B. C. 4005; which is only a single year. And who, it might be demanded, in a matter of so much complexity and of so much nicety as this, could be so sure of the truth of his

conclusions as to be convinced that he could not have made a mistake even of a single year?

A little more reflection however would satisfy us that, simple and obvious and specious as this mode of explaining the difficulty may appear to be, it would in reality only perplex and embarrass the question with insuperable difficulties of another kind. It would throw everything into confusion. It would disturb all the relations of time. It would introduce irreconcilable contradiction between matter of fact and the testimony of revelation. On this principle, the actual beginning of natural annual time, instead of being April 25 at midnight, must have been April 24 at 18 hours from midnight: the actual beginning of noctidiurnal time, instead of being April 25 the feria prima at midnight, must have been April 24 the feria sexta at midnight: the proper epoch of lunar time, instead of being April 29 at 18 hours from midnight, the feria 5ª, must have been May 10 at 18 hours from midnight, the feria 1ª: and (the greatest anomaly of all) the course and succession of hebdomadal time, instead of being reckoned from April 25 the feria prima at midnight, would have to be reckoned from April 24 the feria sexta at midnight.

In short, the coincidences, which really distinguished the true epoch of time both in general and in detail, it is self-evident could never be found except in their own year; and in a case of this kind it would be even less preposterous to go back a thousand years in search of them in any year but their own, than to go back one.

SECTION V.—*On the true explanation of the difficulty.* i. *There is no such anomaly in the natural cycle of leap year, as in the Julian.*

We must endeavour therefore to find some better and more satisfactory means of explaining the difficulty than this conjecture.

And here, as the first step towards this discovery, we begin with reminding the reader that, if April 25 at midnight B.C. 4004 was the first actual commencement of annual Julian time, it was so only because it was the first actual commencement of natural annual time. It must not be forgotten

that natural annual time from the first has never been referrible to Julian; but on the contrary Julian from the first always to natural.

This distinction is of great importance to the present question. The first thing necessary, on the supposition of this perpetual reference of actual Julian time to natural, and not *vice versa,* would be to inquire, Whether there is such a thing in the constant reckoning of natural annual time as the cycle of leap year? The answer to this question has been supplied in a former part of our work[1]. And this being decided in the affirmative; the next inquiry is, Whether this natural cycle of leap year, (this *naturale quadriennium,*) has ever exhibited the same phenomenon as that of the Julian cycle, into the reasons of which we are endeavouring to penetrate? Whether there was ever a natural cycle which consisted of three years, when it ought to have consisted of four? And whether this natural cycle has ever had any epoch but that of April 25 the feria prima, or at the earliest that of April 24 the feria septima, B. C. 4004?

Now nothing is easier than to demonstrate by actual comparison that, as mean natural annual time and mean or actual Julian annual time thus set out together at first from the same epoch; so they have proceeded together ever since, even as measured by cycles of four years alike perpetually: subject to this distinction only, that the first year of the first natural quadriennium of this kind having coincided with the second year of the first Julian one of the same kind, B. C. 4004, it has coincided with it at stated times ever since; so that the epoch of this natural cycle in terms of the Julian has always been the second year of the Julian, and not the first.

The comparison of two years will suffice for this demonstration; one the first year of mundane time whether natural or Julian, A. M. 1 B. C. 4004; the other the 4001st year of the same, A. M. 4001 B. C. 4: the latter just 4000 years, whether mean natural or mean or actual Julian, that is just 1000 cycles of four years, distant from the former. Can any one doubt that the first day of the 4001st actual Julian year,

[1] Diss. vi. ch. iv. sect. iv. vol. i. 468.

reckoned from the mean vernal ingress according to the Julian rule, entered on March 23 at midnight B. C. 4, just as much as the first day of the first, similarly reckoned, on April 25 at midnight B. C. 4004? And can any one doubt in like manner that the first day of the 4001st mean natural year, similarly reckoned from the point of the mean vernal ingress, entered 11 m. 9 sec. 36 th. before midnight on March 22 B.C. 4, just as much as the first day of the first year, under similar circumstances, 11 m. 9 sec. 36 th. before midnight on April 24 B. C. 4004? If not, then the same cycle of four years must have proceeded exactly in the same manner from the first to the 4001st actual Julian year, and from the first to the 4001st mean natural year; that is, from A. M. 1 B. C. 4004 to A. M. 4001 B. C. 4, in either style alike.

It follows that the natural cycle of leap-year never could have varied, nor ever have been subject to any but one law, and that law the proper law of the cycle itself, from A. M. 1 to A. M. 4001. It follows too that the Julian cycle as constantly reducible to this and as constantly equated to this never could have varied any more than this; nor ever have been subject to more than one law any more than this. And these two conclusions must materially conduce to strengthen the presumption, already formed upon other grounds, that the anomaly actually discoverable in the reckoning of the first cycle of leap-year according to the Julian rule will turn out to be something accidental; if any thing can be considered accidental in a case in which, whatsoever is seen to hold good *de facto*, on that very account alone must be supposed to have been necessary, or by appointment.

Let us therefore proceed in the last place, trusting to the Divine blessing, to assign what we hope will appear to be the true explanation of the fact, and a satisfactory solution of all the difficulty connected with it; while it impresses us with still higher and worthier ideas of the inexhaustible resources of that wisdom and foresight, to which nothing is unknown, nothing is unexpected, nothing is unprovided for from all eternity.

SECTION VI.—ii. *The first cycle of leap-year a cycle of three years, and yet a perfect cycle of the leap-day.*

We observe then, with respect to the Julian cycle of leap-year, that, though we speak of it commonly as the cycle of the *leap-year*, it is in reality only the cycle of the *leap-day*. And this distinction is of much importance, especially to the present question. For the cycle of leap-year according to the Julian rule is one of four years, because the cycle of the leap-day in the Julian year is one of four also. But to what is this due except to the fact that the epact of the mean Julian year is six hours of mean time? and because an annual epact of six hours must accumulate to a day and a night in four years; and as soon as the epact amounts to a day and a night it must be taken into the account of noctidiurnal time. If that is the case once in every four years, then it must be taken into the account of the constant succession of day and night once every four years. There must be a constant occasion therefore for a leap-day once in four years; and if so, for a perpetual cycle of the leap-year four years in length.

But what if the mean standard of the Julian year were to be assumed at 365 days 8 hours of mean solar time, instead of 365 days 6 hours? would the cycle of the leap-day in that case be a cycle of four years or one of three? and what if it had or could have been assumed at 365 days 4 hours? would the cycle of the leap-day in that case have been a cycle of four years or one of six? And though it may be said that in supposing such assumptions as these we are putting hypothetical and even absurd and impossible cases; they serve to illustrate and explain the truth of this proposition in general, that the cycle of the leap-day in the Julian reckoning of noctidiurnal and of annual time in conjunction is simply the time in which the epact of six hours, over and above the cyclical period of 365 days and nights of uniform length, accumulates to one day and one night, or to one more period of 24 hours of mean time complete.

If however this is the case, and the cycle of the leap-day in the constant reckoning of noctidiurnal and of annual time in conjunction according to the Julian rule must necessarily

be considered complete, as soon as this epact of six hours has accumulated to a day and a night; then if the first three years of mundane time from B. C. 4004 to B. C. 4001, reckoned according to the Julian rule, did really accumulate an epact of 24 hours which had not yet been taken into the account of noctidiurnal time in conjunction with annual; a leap-day would be necessary in B. C. 4001, to take this in: and the first cycle of the leap-year according to the Julian rule itself, under such circumstances, would be a cycle of three years; and yet not an imperfect cycle, but a cycle which served the same purpose at the end of three years, as any other of the same kind has since served at the end of four; and therefore as complete in three years as any other has since been in four.

The proof of the fact itself which we are thus supposing is not difficult. The primitive rule of the noctidiurnal cycle is or ought to be a demonstrative proof that the reckoning of night and day, in connection with the present system of things, began at sunset, or, as it would be expressed according to the Julian rule, at 18 hours from midnight. But we have already pointed out the distinction between the proper epoch of this cycle in itself, and that of the same cycle as an element which enters perpetually into the annual also. As an element which entered from the first into the annual reckoning of time, and as mixed up with the annual cycle perpetually, the noctidiurnal cycle neither could have at first, nor has ever had since, any epoch but that of the annual itself. The natural epoch of the cycle of natural annual time has always been the point of the mean natural vernal ingress; and the point of this ingress in the first instance of all, for the proper meridian, having been determined to the point of midnight, it follows that the proper epoch of the noctidiurnal cycle, as mixed up with the annual from the first, was the point of midnight also.

In this distinction we find the explanation of the difficulty which we are in search of. The first noctidiurnal cycle in connection with the present system of things having begun at 18 hours after midnight April 24 B. C. 4004; and the first annual cycle in connection with this system also, reckoned from the point of the first mean natural vernal ingress,

having begun at midnight April 25; it follows that six hours of mean time had already elapsed in the simple reckoning of noctidiurnal time, before the reckoning of annual in conjunction with noctidiurnal had yet begun: six hours which under such circumstances could not enter into the account of noctidiurnal time as making part of annual, but must be left out of that for the present, and must stand over for future admission when the nature of the case should allow of it.

It follows that though these six hours, between April 24 at 18 hours and April 25 at midnight B. C. 4004, could not strictly be set down to the account of the epact of annual time in terms of noctidiurnal, between the beginning of annual time in conjunction with noctidiurnal, April 25 at midnight B. C. 4004, and any time later than that; yet they must conspire with this epact to make up an integral cycle of 24 hours, one year earlier than would otherwise have been the case. It must be evident under the circumstances which we are supposing that, between April 24 at 18 hours from midnight, six hours before the first mean natural vernal ingress April 25 at midnight B. C. 4004, and the second mean natural vernal ingress April 25 at midnight B.C. 4003, there would be 365 integral cycles of 24 hours, each of which would already have entered into the reckoning of annual time in terms of noctidiurnal, or of noctidiurnal in terms of annual; and 12 hours, or half an entire cycle of the same kind more, which had not yet done so: and in like manner that between April 24 at 18 hours B. C. 4004, and the fourth mean natural vernal ingress April 25 at midnight B.C. 4001, there would be 1095 cycles of 24 hours, each of which had already entered into the account of noctidiurnal time in terms of annual; but instead of an epact of 18 hours, not yet admitted into that account, there would be an integral period of 24 hours; which being in a state to be admitted at this point of time must be admitted accordingly; could not be denied admission a moment longer. It follows that the last annual cycle before B. C. 4001, B. C. 4002—4001, in terms of the noctidiurnal, must be a cycle of 366 days, not of 365; that is, it must be what in the Julian reckoning of annual time in terms of noctidiurnal would be considered

and called a leap-year, and not a common year. It is easy to see too under these circumstances that the proper epoch of this cycle of 366 days would be April 24 at midnight B. C. 4002, 24 hours of mean time exactly before the point of the mean natural vernal ingress cyclically reckoned from midnight, April 25 B. C. 4001: which is entirely in accordance with what we have already established[m] of the proper epoch of the noctidiurnal cycle in conjunction with the natural, in such a system as the present, which combines them both according to the Julian rule perpetually.

The difficulty therefore, connected with the constant reckoning of the Julian cycle of leap year, from the beginning of things down to B. C. 45, or *vice versa* from B. C. 45 back to the beginning of things, which has so long engaged our attention, would thus we trust have been satisfactorily explained at last; and we might close our remarks on this subject with one more observation, which every rightly constituted mind would acknowledge to be justly due to the discovery so made; viz. That it brings to light a wonderful instance of prospective contrivance, on which no one could reflect as he ought to do without being filled with admiration of that wisdom and that foresight which blended together from the first in such perfect harmony the primitive and the Julian rule of the noctidiurnal cycle; and both anticipated and provided for a contingency (humanly speaking) so remote, and to every thing but Omniscience so inscrutable, as the proper Julian cycle of leap year, 4000 years before its time.

SECTION VII.—*Corollary from the above conclusions, that the true epoch of the Julian cycle of leap year is B. C.* 4005 *after all.*

It must not however be supposed that six hours of mean time could enter into the Julian reckoning of annual time under any circumstances which did not enter into the natural also; or would enter into the former at all, except simply and solely because they entered into the latter also.

Now if the mean natural vernal ingress, B. C. 4004, according to the assumptions of our Fasti, for the proper meri-

m Dissertation vi. ch. iv. sect. iv. vol. i. 472.

dian took place April 24, 23 h. 48 m. 50 sec. 24 thds. from midnight; then, the same assumptions being supposed to have held good the year before, it must be inferred from this fact that the mean natural vernal ingress, for the same meridian, B. C. 4005, must have taken place April 24 at 18 hours from midnight. And might we be permitted to assume that the first year of the present system of things *de facto* was B. C. 4005, and not B.C. 4004, it would follow from the fact which has just been pointed out that noctidiurnal time according to the primitive rule, as bearing date at 18 hours from midnight, (that is, noctidiurnal time *per se*,) and noctidiurnal time as entering perpetually into annual, and therefore as bearing date perpetually from the mean natural vernal ingress, would both have begun and have proceeded together from the common epoch of April 24 at 18 hours from midnight, B. C. 4005.

In this case, and as noctidiurnal time was referrible to such a common epoch in both capacities, (both as something distinct and independent in itself, and as something which went to the constitution of annual time perpetually also,) no one could hesitate to draw the conclusion that, between the point of sunset (18 hours from midnight) B. C. 4005, and the point of midnight B. C. 4004, an epact of 5 h. 48 m. 50 s. 24 thds., or what might be considered equivalent to six hours of mean time exactly, must have already been accumulated, which could not enter as yet into the account of noctidiurnal time, though it must have made part of that of annual.

We have already more than once declared it to be our opinion that though the Mosaic creation may be, or rather must be, the beginning of time in all its measures relatively to ourselves, it is not so in reference to time itself: and, independently of other arguments which might be alleged in support of this opinion, the fact which we have just pointed out must do much to confirm it. For if an epact of six hours, or what may be assumed as six hours, had already been accumulated in natural annual time before the point of the mean natural vernal ingress, April 25 at midnight, B. C. 4004; this is demonstrative proof that the decursus of mean annual time, from the mean vernal ingress B. C. 4005 to the mean vernal ingress B. C. 4004, could not have been inter-

rupted. And yet it must still be certain, on the faith of the Mosaic account, and on the strength of the many concurrent proofs to that effect which we have adduced, that the proper epoch of the Mosaic creation itself was the point of midnight and the mean natural vernal ingress coincident with it, B. C. 4004; and consequently that B. C. 4005, dated from the point of the mean vernal ingress, whatsoever that might be, must be anterior to the Mosaic creation at least; must make no part of the reckoning of time from the date of the Mosaic creation; and if it enters into the reckoning of time at all, it must be into that part of the reckoning which is strictly antemundane in contradistinction to mundane; and is both prior to the Mosaic creation, and excluded also from the reckoning of time from the date of that creation.

It behoves us to speak with caution on such subjects as these; and we cannot speak of them with any degree of reserve and circumspection, without feeling that we are in danger of treading on forbidden ground, and perhaps of intruding presumptuously into mysteries which are purposely concealed at present from human knowledge. Supposing however the actual connection of the present system of things with an older one of the same or of a similar kind, which came to an end before the present began; we might conjecture that possibly this antemundane constitution and system of things immediately prior to the existing one came to an end in B. C. 4005: and that the moment appointed by the Deity for its dissolution was that when the earth in its annual revolution around the sun was arrived at the point of the mean vernal equinox in this very year, April 24, at 18 hours from midnight. The sun would be setting at that moment, (the season of the year being the vernal equinox,) yet would still be visible; and it may be discovered by calculation that the moon would have come to the full April 26, the same year, soon after midnight; and therefore must have been already risen and already above the horizon, in the opposite quarter of the heavens, and, already in possession of almost the fulness of its light, April 24 at 18 hours. Yet it would follow that this was the moment, and these were the circumstances, at which and under which it pleased the Divine wisdom to extinguish the light of both at once; yet

without any interruption either intended or produced thereby in the continuity of the measures of time, to which either of them had always been instrumental.

The state of transition then from the last regular system of things to the next to it in the order of time, the intermediate state between the last antemundane world and the Mosaic creation, would thus bear date from the point of the mean vernal equinox B. C. 4005, and in the first year of the Julian cycle of leap year; and the interval between the mean vernal equinox in this year and the mean vernal equinox in the next (the point of midnight according to the Julian rule and in the second year of the Julian cycle of leap year) would be the proper duration of this antemundane state of things, devoted to the being and duration of *no-world* properly so called; the year of confusion in the most intense meaning and signification of the term; the year of Tohu and Bohu; during which there was neither order nor form nor light nor life among the sublunary works of God; but nature lay engulphed in her own womb, and chaos and darkness, destruction and death, were permitted to rule uncontrolled: yet without any interruption of the measures of time, either the revolution of the earth about its own axis, or the revolution of the moon about the earth, or the revolution of both round the sun; only that all were continued and all produced their effect in darkness.

Such is the picture which our imaginations might draw for themselves of this ante-mundane scene. Whether it has any foundation is known only to God, and to such of his rational creatures as might be spectators of the event. May our own speculations on this subject be innocent at least in his sight! May we never desire to know any thing which is not discoverable by means of the light which he himself has vouchsafed us! And may we never conjecture any thing which is not consistent with his own proceedings!

This state of the case however is the best adapted of all to explain the difficulty connected with the first cycle of leap year; by making it clear that the true epoch of this cycle in general after all is B. C. 4005. We ourselves have taken this possible state of the case so far for granted as to begin the actual succession of the Julian cycle of leap year, in our

general tables, as if from B.C. 4005; though, in order to shew that this is not actually but only virtually its epoch in connection with the present system of things, we have cut off this year from all which follow it, by a line drawn underneath it.

## CHAPTER III.

### viii. *The meridian of our tables arbitrarily assumed.*

#### Section I.—*On the absolute epoch of time.*

It may be objected to our system of time that so important a condition as the meridian of our tables is arbitrary and positive; that we assume it to be the meridian of the ancient Jerusalem; and yet that we have offered no proof of the assumption. This too is a serious objection; and it requires to be carefully answered.

We must begin with defining the absolute epoch of time. The absolute epoch of time, the epoch of time which *is*, of time of the *primum mobile*, as it is sometimes denominated, is that point of antecedent duration *before* which the course and succession of things which we call time was not yet in existence; *at* which it came into existence; and *since* which it has never ceased to be in existence. And we have already declared it to be our opinion that whatsoever this epoch may have been in itself, yet, relatively to ourselves and to our proper system of things, it is that of the Mosaic creation.

It is not enough however that time which *is* should some time or other have begun to be, and ever since have continued in being; it is necessary also that it should have begun at first according to some law, and have continued ever after conformably to that law: so that if this law at present and *de facto* is the Julian, it must be regarded as the Julian also *de facto* or virtually from the first. This being the case; the absolute epoch of being to time which *is* at present, and always has been, in connection with the present world, must be the absolute beginning of time, so continuing and so connected with the existing state of things, in conformity to the Julian law.

SECTION II.—*The necessity of some primary meridian to which the absolute epoch of time must first be referrible.*

And hence the necessity of a primary meridian. It is not possible that time could have begun in any of its measures, much less in all, subject to a certain law, and that law the Julian, and could have continued to go on ever after in all and each of those measures in conformity to that law, except as referrible to some one meridian; which meridian, under such circumstances, must be the primary meridian.

This distinction may be rendered more intelligible by the following explanation. The diurnal rotation carries every point on the surface of the earth perpetually round the common centre of gravity of them all; and every point in the surface being supposed to lie in the plane of some circle parallel to the equator, the circumference of each of which contains 360 degrees alike, the equator is assumed as the just measure of such a circle with respect to the space described by a given point of the circumference by virtue of the diurnal rotation of the earth. The diurnal rotation itself is invariable; and equal parts of the equator are carried by it over the meridian in equal times: and it is found from observation and experience that 24 hours of time and 360 degrees of angular motion correspond to each other perpetually: and that is at the rate of 1 hour of time to 15 degrees of angular motion, of 4 minutes of time to 1 degree of angular motion, of 4 seconds of time to 1 minute of angular motion, and so on, to any extent[p].

Could we imagine the existence of a time when the earth was absolutely at rest on its centre of gravity, and every part on its surface was as yet in the same state of quiescence, and then an impulse of circumrotation under such circumstances to have been communicated to it all at once; there could be no doubt that this impulse would have been felt and obeyed by every part of its surface at once also; and that each would have begun to revolve round the common centre of gravity of all, in obedience to and in the direction of the impulse, at once. And were such a movement to be considered the

p Cf. Biot, Traité Élémentaire d'Astronomie Physique, tome ii. § 331. 404, 405: 417. § 15. note.

proper beginning of time, as measured or measurable by the revolution of the earth about its own centre perpetually, it is evident that the beginning of time in this sense would be coinstantaneous at all parts of the surface; and that there could be no absolute epoch of time under such circumstances to one part more than to another. There could be no such thing then under such circumstances as a primary meridian. Every meridian must be primary alike in this case; or at least no one more than another. But the case is different, when both the origination of time in the first instance and its continuance ever after are referred to a positive law; and that law such as the Julian.

Let it be assumed for instance, that it was the positive law of the period of 24 hours, as the proper measure of the noctidiurnal cycle perpetually after this origination, that it should be reckoned not from any point of the diurnal revolution indifferently, but from that of midnight. We demand whether this could be possible for more than one meridian; if midnight at a given meridian would be one hour before midnight at any other which was 15° west of that, and one hour after midnight for any other which was 15° east of it?

Let it be assumed in like manner, that the positive law of lunar time from its first origination was such as to require it to be cyclically reckoned perpetually from the new moon or conjunction, as always coincident with 18 hours from midnight. We ask whether that too would be possible for more than one meridian, if 18 hours from midnight for one meridian would be 17 hours from midnight for another, and 19 hours from midnight for a third? and so on.

Let it be supposed in like manner, that the natural law of annual time from the first being such as required it to be reckoned from the point of the mean vernal equinox, the positive law combined with this natural one from the first also was such as required the point of the mean vernal equinox itself to be reckoned from the point of midnight perpetually. Could that be possible for more than one meridian? i. e. the one meridian with which it might actually be the case at the time that the point of the mean vernal equinox was coinciding with the point of midnight.

We see then that for all the measures of time, if they

were all to be reckoned from the first and ever after according to a positive law like the Julian, there would be a necessity for a primary meridian: and that this meridian must be that of which this fact of the origination of each of these measures, in subordination to the rule and the law prescribed, would hold good in the first instance of all. The distinction thus pointed out makes all the difference between what would be very possible, and what would otherwise be absolutely impossible. A primary meridian, referred to a coinstantaneous origination of time every where, there could be no where. A primary meridian, referred even to a simultaneous origin of time every where, yet to one subjected also from the first to a positive law or qualification of the reckoning of time itself so originated, there might be, or rather there must be, some where: for we cannot imagine a positive rule of the succession and reckoning of time, even from the first, which would not be applicable *some* where, though it could not be so at the same moment *every* where.

The question therefore is reduced at last to this; To what meridian on the surface of the earth would the Julian rule of each of the measures of time, the noctidiurnal, the lunar, the annual, (and we may add the hebdomadal, as only a modification of the noctidiurnal from the first,) be first and properly applicable, B. C. 4004? for if there was actually such a meridian, *that* must be the primary meridian.

### SECTION III.—*The primary meridian that of the ancient Jerusalem.*

The circumference of the equator being divided into 360 equal parts or spaces called degrees, each of them equivalent to four minutes of time; the astronomers and geographers of old made 180 meridians, two degrees of space and eight minutes of time asunder respectively. Modern astronomers and geographers are content to make only 24; 15 degrees of space and one hour of time asunder respectively; which they lay down on the globe and discriminate by means of horary circles, passing through the poles of the earth and through these points of the equator.

There are in reality as many distinct meridians as there are distinct points of space in the entire circumference of the

equator; nor can any two points of the surface of the earth in strictness have the same meridian, which are not situated in the plane of the same great circle passing through the poles of the earth. The number of meridians established by nature itself appears to be 4000; each of them 21 sec. 36 th. in time, and 5′ 24″ in angular motion, asunder [q]. But there is no necessity to enter on these distinctions here. We have assumed in our tables that the primary meridian, such as we have described, is the meridian of the ancient Jerusalem; and we submit to our readers the following arguments of the truth of this assumption.

i. The conditions which we have enumerated as necessary to determine and constitute the primary meridian are so many and so distinct, that they could not meet together and coincide in any one meridian in the first instance, except by appointment. The primary meridian, to unite them all, must have been *positive;* and if it was to be positive, then the probability is that it would be the meridian of Jerusalem. No locality on the surface of the earth could be considered more likely *a priori* to furnish the primary meridian than Jerusalem.

ii. It is clear from the account which has been given of the two miracles, in the time of Joshua and in that of Hezekiah respectively, that the final end of both was to give some one numerical revolution of the earth about its own axis an integral period of 24 hours of mean time, over and above the stated measure of one such revolution; but not to disturb or derange the stated and regular succession of the period of 24 hours itself. The meridian then, to which that addition was critically adapted, must have been the primary meridian; the meridian from which and for which this succession itself was first and properly reckoned: and this meridian was that of Jerusalem. We have seen that, for the meridian of Jerusalem, the addition of the first 12 hours was made exactly at 6 A. M. of mean time; and that of the second exactly at 6 P. M.: consequently that, for this meridian, the effect of both was just the same as if an addition of 24 hours of mean time had been made all at once, in the constant succession and constant reckoning of that period, from its proper epoch, whether 6 P. M. according to the primitive rule, or midnight

[q] See the Introduction to the Tables, part iii. ch. i. sect. xi.

according to the Julian. It was impossible that this could have been the case for the meridian of any other place on the surface of the earth, which was not absolutely the same with that of Jerusalem. We infer then from this distinction, (and we think justly,) that the primary meridian must be that of Jerusalem, and of all such places as have the same meridian as Jerusalem.

iii. The epoch of the noctidiurnal cycle, in the sense of the diurnal rotation, measured whether in mean solar time or in mean sidereal time perpetually; the epoch of the mean annual cycle in the sense of that of mean equinoctial time; and the epoch of the mean motion of the sun in longitude; each in conjunction with the present system of things, and each traced down from the beginning to the present day; are found to have been all first and properly adjusted to the meridian of Jerusalem. We discover this fact from the comparison of each of these things for the meridian of our tables with the same thing for any other meridiau at present, as that of Greenwich or that of Paris; and we hope to lay the proofs of the fact some time or other before our readers. The fact however being established, it follows that the primary meridian, for the present constitution and system of things, in reality must be that of Jerusalem.

### SECTION IV.—*On the probable reasons why the meridian of Jerusalem was appointed to be the primary meridian.*

As Scripture itself has not defined any primary meridian, nor designated even that of Jerusalem itself in such a capacity; we cannot be sure that it is proper to inquire into the reasons which may have occasioned that designation, though the fact of the designation itself may be forced upon our conviction by arguments of its own: still less can we make ourselves confident that, when we have conjectured the reasons of the designation, those reasons must necessarily be the truth. All that we shall venture to do therefore with reference to this question shall be simply to point out what there is, and what there always has been, and what there is reason to suppose there will still be, to distinguish Jerusalem above every other locality on the face of the earth; and that too, as directly collected from the testimony of Scripture, or

by just inference deducible from it; and then to leave our readers to draw their own conclusions from the premises thus laid before them.

First then; As Judæa is called the Holy Land, so Jeruralem is called the Holy City. As Judæa was selected to be the local habitation of the people of God, so was Jerusalem to be the site of the temple. As Judæa was the chosen and appointed abode of the church in general, so was Jerusalem that of the Head of the church, that is, of God himself, in particular.

Secondly; It is capable of being proved from Scripture that as Paradise, or the Garden of Eden, was part of a greater locality called Eden, so was Jerusalem a part of Paradise. The locality of Jerusalem was comprehended in that of Paradise. This is not the place to enter upon the production of such proof: but we do not hesitate to assert the fact, because we have satisfied ourselves of its truth.

Thirdly; It is also to be collected from Holy Writ that the paradisiacal scheme of things, which the wisdom and goodness of our common Creator intended at first for his rational and his irrational creation, will still be carried into full effect before all things come to an end; and that, when this is the case, Jerusalem will not lose the distinction and the preeminence, heretofore awarded to it exclusively, of being the city of God, and the site of his temple or of his visible presence on earth, and the metropolis of his church and his people; but will retain it, and with signal additions too, to render it still more illustrious, and still more in character with such a designation: of the nature of which we can form only a very general idea at present, but which time and the event will both particularize and explain. And on this point too, it would not be practicable to enter on the necessary proofs at present: but those who are desirous of inquiring further into this question may find something relating to it, though far from every thing which might be said about it, in the latter half of the first volume of our own Exposition of the Parables; and in other parts of that work.

We shall conclude with a few observations of a general kind.

i. A primary meridian being established, all other meridians in comparison of this must be reducible under the head

of secondary; all being referred alike to one and the same rule of the reckoning of mean time, and that the proper Julian one. The meaning of this distinction is that, if it was 12 o'clock at night April 25 B. C. 4004, at the ancient Jerusalem, when Julian time reckoned from midnight first began, it could not be 12 at night at the same moment for any meridian either east or west of that; though it would be so some time or other, for every meridian west of that, in the compass of the same 24 hours of mean time, next ensuing, reckoned from 12 at night for the meridian of Jerusalem.

ii. As there can be only one primary meridian in this sense, and all others in comparison of that one are properly to be regarded as secondary, it follows that the difference between this meridian and all other meridians, measured and reckoned along the equator, is properly to be measured and reckoned in one direction; viz. *westward.* The difference of meridians is called by astronomers and geographers the difference of longitudes; longitudes themselves being reckoned along the equator, from some point which is assumed to be 0 or zero. And longitudes, according to the rule which has usually been allowed to prevail, are reckoned either east or west of this point, indifferently. It has always however been recommended by the most intelligent and reflecting persons, and it has been strongly urged of late years by men of science themselves, that all longitudes should be reckoned *westward* of the zero point of the reckoning, (whatsoever that may be,) which serves as the first meridian, from 0 to 360°; just as right ascensions are reckoned *eastwards* from 0 to 360° also. It is needless to add that this is the rule which nature itself established, when she constituted a primary meridian, and made all other meridians secondary in comparison of that.

iii. The meridian of Jerusalem being assumed as the true zero or 0, that of Greenwich, reckoned according to the above rule, is 2 h. 20 m. 47 sec. *west* of that of Jerusalem; and the meridian of Paris is 2 h. 11 m. 25 sec. It follows that when it is 12 at night at Jerusalem it is 21 h. 39 m. 13 sec. after midnight on the day before, reckoned according to the Julian rule from midnight, at Greenwich, and 21 h. 48 m. 35 sec. at Paris. It follows too that, if mean time began to be reckoned

on April 25 at midnight B. C. 4004, for the meridian of Jerusalem, it would begin to be reckoned from midnight April 25 2 h. 20 m. 47 sec. later at Greenwich than at Jerusalem, and 2 h. 11 m. 25 sec. later at Paris: yet from midnight or 0 h. 0 m. 0. sec. April 25 in the local time of Greenwich or of Paris, as much as in that of Jerusalem itself. And this distinction would hold good of every meridian, different from that of Jerusalem and west of it, in this first instance of all; viz. that mean time, measured by the period of 24 hours perpetually, but reckoned according to the proper Julian rule from midnight, would begin to be reckoned from 12 at night, April 25 B. C. 4004, in the local time of each of these meridians in succession all round the globe; but the local time of a given meridian, and the absolute reckoning of mean time, measured by this period of 24 hours itself perpetually, would be the same only in the case of the primary meridian.

iv. and lastly: Though every civilized nation on the face of the earth would naturally desire to vindicate to its own capital, or to its own observatory, the privilege of defining the primary meridian; it is clear that no one nation would have any more right to do so than another: and it is still more clear that mutual jealousies, rivalries or antipathies, would effectually prevent the acquiescence of all mankind, or of the principal and most influential part of mankind, in the assumption of a privilege by any one capital or by any one observatory, which could not be conceded to that one without compromising the independence or admitting the inferiority of all the rest. But all nations, all Christian nations and communities at least, might agree to delegate this privilege to Jerusalem. No national pride, no mere punctilio, would need to be offended by a concession like that; which after all would amount only to the simple admission of a matter of fact, which would still be the same, whether it was recognised and admitted by general consent or not; viz. that the primary meridian both did pass through Jerusalem from the first, and does so pass still. It has been so ever since this present system of things began to be; and it must be so as long as it continues in being. And what city so worthy to fix and define the primary meridian, in the estimation of all Christian communities at least, as Jerusa-

lem? the birthplace of their common Christianity; the city of their Saviour; the city of the prophets and of the apostles; the still surviving monument of Eden and Paradise; the cradle of the church in its militant state, the metropolis of the church in its triumphant state; "the city which had foundations," laid in the Divine mind from all eternity; the city planned and designed in the fulness of time by the Architect of nature himself: in one word, "the city whose builder and maker is God."

## CHAPTER IV.

1. *On the argument from tradition, or the general belief of mankind, upon the particular question of the season of the year at which the world was created and time began.*

### SECTION I.—*Particular differences of opinion among learned men, on this point; and the degree of authority due to each.*

THE concurrence of the measures of time in one year B. C. 4004, and in one month of that year, the month of April, and in one week of that month, from April 25th at midnight to May 2nd at midnight, having been established by such a variety of proofs, no conclusion would seem to be less doubtful than *this;* That the true season of creation in the natural year was the spring; and that the true epoch of mundane time, or of time in connection with the present system of things, was the point of the mean vernal equinox itself.

Opinions have always been divided upon this question; and it must be admitted that, were it to be decided by opinion and by authority only, no judgment could be pronounced on either side, which might not be met by and confronted with an opposite one, apparently entitled to equal deference and respect. The conclusions, opinions, and even conjectures, of learned and sensible men ought to be allowed their proper degree of weight. Still opinions merely can never be decisive on questions of fact. Opinions themselves must ultimately be reduced to this issue, whether they are agreeable to testimony and to matter of fact? If they can stand be-

fore such a touchstone as that, it is well. But even in that case, they add nothing to the proof of the fact: they merely illustrate its antecedent probability. But if they cannot maintain their ground, when confronted with matters of fact and with the proper evidences of their truth, no one, we should suppose, will seriously think them entitled to the least degree of deference or respect.

The example of Scaliger may serve as an instance of the manner in which particular opinions on this subject have been taken up or abandoned by learned men; and of the kind of reasons by which their judgment concerning it has been influenced. Scaliger was once of opinion that the world was created in the spring: he afterwards renounced this opinion and embraced the contrary one, that it was created in the autumn; and that mundane time was to be reckoned from the autumn of the natural year. "Sed ante Exodum initium anni putabatur ab autumno . . . igitur ubi initium anni ab ultima antiquitate fuit, inde et rerum quoque initium repetendum: quod quidem a nobis factum, damnata priori sententia, quæ initium rerum statuebat a vere[r]." It would be an act of injustice to the memory of this eminent man, to say that this change of opinion was destitute of justification in the truth of the matter of fact which is here alleged. The beginning of the civil year at the Exodus was certainly falling in the autumn. The inference drawn by Scaliger from this fact was founded upon an assumption, obviously not authorized by the mere matter of fact itself; viz. That it must always and even from the first have fallen in the autumn.

But though the truth of this particular question, regarded as one of fact, can be decided only by one species of proof, viz. that by which all questions of fact in general are to be determined; still we are willing to consider and to treat it as one which might admit of being decided, within certain limits of the truth, on various grounds of belief: among which opinion and authority should be allowed their proper weight and force. Opinions and authority however on such a question, to come with the greatest degree of weight and force, must not be those of individuals however eminent for

[r] De Emendatione, Prolegomena, pag. xv: cf. lib. v. 368. C.

their learning or judgment in other respects, and particularly in modern times, but those of nations and communities, who only can be considered entitled to speak in the name of mankind; especially of those nations whose history goes furthest back, and whose traditions and testimony reflect for the longest time the image of primitive belief in its purest form.

### SECTION II.—*Distinction necessary to be drawn between the traditions of the antediluvian world and those of the postdiluvian.*

Preliminary however to such an inquiry it is necessary to draw an important distinction. Had we to do at present with the antediluvian race of mankind, we should have to do with antediluvian tradition only; and antediluvian tradition could look back to no epoch but that of creation, and of the absolute beginning of things. The event of the deluge and of the universal destruction of the old world would make a great difference in that respect. The postdiluvian world could not fail to regard the deluge as the end of the first state of things, dated from the creation; and the beginning of that second state, with which they themselves were properly connected, to be the year after the flood. It is clear that genuine postdiluvian tradition must stop short at the flood. The remembrance indeed of the former state of things could not be obliterated even by that catastrophe; and we might expect to find various allusions to it, floating down the stream of postdiluvian testimony itself: but the truer and more authentic the traditions of the second race of mankind, and the more closely connected with their origin, their antiquity, their chronology, simply and faithfully represented, the more necessarily must all such traditions be circumscribed by the deluge, and even by the dispersion.

And when we consider this natural and almost inevitable tendency of such an event as the deluge to substitute a new epoch, not only of human existence, but also of time itself; it cannot fail to appear a providential dispensation that there should have been very little difference between the new epoch of the reckoning of mundane time and the old one itself: the proper epoch of either and under all circum-

stances being assumed to have been the season of spring in general. The old world was created at the mean vernal equinox, April 25; it was destroyed, May 5, 23 days after the mean vernal equinox: and Noah descended from the ark on May 16, the next year, only eleven days later than the date of the destruction the year before; and consequently only 34 days later than that of the mean vernal equinox the same year.

### Section III.—i. *On the Egyptian tradition. The primitive sphere.*

Let us begin the review of primitive tradition, which we are proposing to institute, on this one point of the origin of time, and of the true season of the year at which the creation took place, with that of the Egyptians: among whom the greatest amount of information, respecting the beginning of the present system of things, not derived from revelation, but handed down by a perpetual tradition, and authenticated by a common belief, appears to have been deposited; and for a long time too, as much entitled to praise and admiration for the simplicity with which it was retailed, as for the fidelity with which it was preserved.

There is some risk however lest, while referring to these topics at present, we should anticipate what will require to be more fully and circumstantially explained hereafter; or, if we content ourselves with general statements, that we shall not render ourselves intelligible to our readers, nor appear to make good our positions as we proceed. We will endeavour therefore to select some *one* argument, which may be summarily stated, and yet will be competent, in our opinion, to ascertain the particular belief of the Egyptians from the earliest times, on this one question of the true origin of natural annual time.

Now such an argument as this appears to us to be furnished by the history of the sphere. We are able to trace this history from the first of the modifications of the sphere down to the last, when it received the stamp and impression which it has retained to the present day: and we are also in a condition to prove that these modifications originated in Egypt: that the sphere of antiquity, the only mo-

dification of the sphere known to the postdiluvian world, and that which has descended to our own day, is purely Egyptian in its origin.

The ancients remark that there is neither beginning nor ending, properly so called, in a sphere. There is no one point on the surface of a sphere which has more right to be considered the first than any other. If this is the case, *a primum mobile,* an epoch, a zero point, in such a thing as the revolution or reckoning of a sphere, must be determined either arbitrarily or by the matter of fact. The order of this revolution and of this reckoning in the celestial sphere at present, as every one knows, is from Aries onwards. No one however can say why it is so at present, except because it has always been so: and no one can say why it has always been so, who does not go back to the origin of the reckoning, or to the first division of the sphere itself: and no one can do that without going back to Egypt, and to the original rule of the sphere in Egypt.

Now testimony is unanimous that the sphere of the Egyptians was always reckoned from Aries. Nor do we know this merely from the accounts of the Egyptian sphere which have been transmitted to us through the Greeks; though the Greeks had a particular reason to make them more attentive to the peculiarity of the Egyptian rule in this respect; viz. because it was opposed to their own prejudices, which inclined them to reckon the sphere from Cancer rather than from Aries. The sphere of the Egyptians then, the first and oldest delineation of the sphere, was graduated from Aries: and, when we speak of Aries, we mean of course the point of the vernal equinox. We ask therefore, on what principle was this done? Arbitrarily, and without a reason? or for some sufficient reason? And what reason so sufficient and so competent as the matter of fact, handed down by an authentic tradition, that time itself, as measured perpetually by the course of the sun and of the rest of the heavenly luminaries, began at the vernal equinox? We do not however rest the fact of this reason on its own probability. We have proofs to produce which will leave no doubt concerning it. And yet even its own probability must do much to recommend it to acceptation, especially in explanation of a

matter of fact like that of the assumption of the first point of the sphere; which must have been determined either without any reason at all, or for some sufficient reason like this.

We observe further on this subject in general that nothing supplies so clear a proof as this history of the sphere, that down to a certain time the Egyptians were still in possession of a chronology of the world, which in truth and certainty was not inferior to that of the Bible itself; a chronology as authentic with respect to the epoch of the old world and before the flood, as to that of the new world and after the flood. We observe also that, when the first division of the sphere was thus made in Egypt, a distinction was introduced; the knowledge of which is of the utmost importance both to the right understanding of the principles and details of the sphere itself, and to a correct idea of the state and degree of the science of astronomy among the Egyptians at the time. Modern astronomers however, even the most scientific, and even those who have written the history of ancient astronomy, have hitherto been ignorant of this distinction; which it was very necessary they should have known, in order to do justice to their subject.

This distinction was that of a double sphere; one attached to a fixed and invariable epoch, the other attached to a moveable and variable one; yet the former the standard of reference for the latter perpetually. We can give no better or more characteristic denomination to the sphere of the former description than that of the sphere of Mazzaroth; an Hebrew word, the meaning of which we hope to explain elsewhere. It was the abstract idea of the sphere, as referred to nothing but the ecliptic, or to the annual pathway of the sun in the heavens and among the stars, and to its component parts which are called signs. The other sphere was the tropical, in the ordinary sense of the term; the details of which are necessarily to be referred to the seasons and to the cardinal points of the ecliptic. It was well known to the ancient Egyptians that these points were liable to recede on the ecliptic itself: and, if we are not greatly mistaken, the mean annual rate of that recession, which astronomers call the precession of the cardinal points, was known to them

also. This tropical sphere then was so combined with the sphere of Mazzaroth, that the cardinal points in the former were both determined and laid down at first, and reckoned ever after, in terms of the latter. This will be understood as soon as it is known that the *first* degree in the tropical sphere was laid down originally in the *fifteenth* degree of the sphere of Mazzaroth; and yet in the true intersection of the mean vernal equinox with the sphere of Mazzaroth also: and that, while the Julian epoch of the tropical sphere, so laid down and graduated in terms of the other perpetually, was constantly the same with the Julian date of the mean vernal equinox; the Julian date of the sphere of Mazzaroth was a fixed and invariable term, March 24; which was assigned as its epoch in the first instance, and retained in that capacity ever after, because March 24, when these distinctions were made, *mutatis mutandis* answered to April 25 at the beginning of things.

The primitive Egyptian tradition on this point of the true origin of mundane time, and its entire conformity to the matter of fact and to the testimony of Holy Writ, are further attested by the first and oldest scheme of the lunar mansions; which was conceived and delineated along with these two spheres, the tropical sphere and the sphere of Mazzaroth, and was attached to the same epoch in general. It is illustrated too by the importance attached to this epoch of March 24, now for the first time associated with the sphere of Mazzaroth, or to some corresponding term in the month of March; the evidence of which from this time forward is discoverable among other nations of antiquity, as well as among the Egyptians. The concurrence of these nations too in fixing on a term like this, for a similar purpose, is not easily to be explained, except by the deference universally paid to the example of Egypt, confirmed and enforced by the common persuasion every where too, that the true origin of time itself was to be sought for and found at the same season of the year.

It cannot indeed be denied that lower down in Egyptian history we meet with a different tradition, relating to the *natale mundi.* But it is much lower down. It is many centuries later than the first delineation of the sphere on the

principle which has just been pointed out. The authorities also for the fact of this different tradition are themselves eminently modern; Solinus, and Porphyry, and Vettius Valens. Yet we are not disposed to call their testimony into question. Opinions were liable to change on such a subject as this, among any of the nations of antiquity. We are concerned only with their oldest and most authentic forms. No novelty of later date can set aside a well attested contrary persuasion of a more ancient date; nor supersede its claims to be considered the most genuine, as well as the earliest, expression of the popular tradition and the popular belief on such and such a point.

As to this different tradition of later times, it is sufficient to state it, to see to what it must have been due, and in what manner it is ultimately to be explained. According to this tradition then, the world was represented to have come into being on one of these three days, or on all these three days, July 20–22; that is, on some one, or on all, of the stated days of the heliacal rising of Sirius in Egypt. This opinion therefore was connected with the Sothiacal period; with the influence of Sothis, Sirius, or the dog-star, associated with that period; and with the worship of Osiris and Isis. It could not be older than these three things, as all connected together, in Egypt: and we hope to demonstrate hereafter that none of these is older than B. C. 1350.

### SECTION IV.—ii. *On the Chaldaic tradition.*

It seems to be agreed that the astrological system of antiquity was invented and brought to perfection in Chaldea. If the Egyptians had a system of this kind, which might be called their own, (and there is reason to believe that there was also an Egyptian system of astrology either older or later than this of the Chaldeans,) it differed more or less from the Chaldaic: and whatsoever it was, the Egyptians themselves appear to have renounced it at last, in order to adopt that of the Chaldeans in its stead. It is a singular fact that, superior as the Egyptians were to the Chaldeans in the true science of astronomy, yet in this particular science of astrology they seem to have voluntarily acknowledged themselves their inferiors, and to have voluntarily submitted

to be taught by them: so much so, that from the time when the false and spurious astronomy of the Chaldeans, under this specious recommendation of astrology, first gained a footing in Egypt, we may date the decay of their genuine astronomy itself.

Now in the astrological writers of antiquity, and in references to the same subject by others, not professedly astrological, yet treating of the same things, we meet with frequent allusions to a *genitura mundi;* the credibility of which after a time seems to have been every where taken for granted. And though this is often proposed as of Egyptian origin, no one can doubt it was a purely Chaldaic invention. According to this, the *natale mundi* coincided with that state of the heavens, when the moon and the sun, and each of the five planets, (all that the Chaldees were acquainted with,) was situated in its proper domicilium, or house; so that the same line of conjunction would have passed through the centres of each of them: the moon in the xvth degree of Cancer, the sun in the xvth degree of Leo, Mercury in the xvth degree of Virgo, Venus in the xvth degree of Libra, Mars in the xvth degree of Scorpio, Jupiter in the xvth degree of Sagittarius, and Saturn in the xvth degree of Capricorn. And from this position of each at the beginning of things the authors of this representation professed to derive the right of each to its respective house; and the rule by virtue of which it became entitled to the lordship not only of the house or sign which it was occupying at the time, but also of another which it was not occupying at the time. For it is well known that, in this astrological system of antiquity, each of the planets, properly so called, (each of the above, except the moon and the sun,) were owners and regents of two houses or two signs.

The mere statement of this supposed position of each of the planets in the 15th degree of its proper sign is sufficient to connect this *genitura mundi* with the sphere of Mazzaroth; and therefore to prove that it could not be older than the first division of the sphere in Egypt. We hope to shew in due time that such was actually the case. In fact, when the Julian date of this *genitura* comes to be ascertained, (for it has a Julian date,) it turns out to be neither more nor less

than that of the Babylonian correction of the primitive calendar, of the epoch of August 8 B.C. 1106; a date intended from the first, in the Babylonian cosmogony, of the supposed beginning of things.

But that the Chaldeans had among them a more genuine and authentic tradition relating to the origin of things, older than this, and one which did not yet differ from the Egyptian, may be inferred from the fact that the sphere of the Chaldeans did not differ from that of the Egyptians. The Chaldean sphere was derived from the Egyptian; and it differed so little in its principles and details from the Egyptian that, whereas the Egyptian sphere in the first instance of all allowed Scorpio the space of two signs, and passed to the Chaldees with Scorpio in possession of two signs; this peculiarity was retained in the Chaldaic sphere even when it was no longer retained in the Egyptian. The Egyptian sphere in the course of time took away one of these signs from Scorpio and allotted it to Libra; the Chaldaic sphere always consisted of xi signs only, but one of these was a sign of 60 degrees, belonging to Scorpio. It is in our power to explain the reason why the Egyptians at first made such a division of the sphere as this; and that consistently with the principles which guided them at the time they could not do otherwise than allow Scorpio in particular the space of two signs. In this state however the sphere passed to the Chaldeans; and having once received and adopted it, with Scorpio in possession of two signs, the Chaldees could make no change in it in that respect afterwards: for astrology like popery is committed to its own infallibility, and can never retract what it has begun with defining and laying down.

Again, as soon as the Greeks came to be more intimately acquainted with the Chaldaic traditions than they had ever been before, that is, as soon as Alexander the Great had opened them the way to Babylon in B.C. 331; we find a Chaldaic tradition handed down through the medium of the Greeks, that they had observations and records among them which went back 1903 years from this occupation of Babylon by Alexander. Whether such records actually existed among them at this time is another question; that Callisthenes was

made to believe they did, and that he represented to Aristotle merely what he himself had learnt at Babylon, there seems no good reason to doubt. We hope to shew hereafter that the inference from the fact of this tradition is just the same, whether these observations actually existed or not; but that, as referred to its proper epoch in the time of Callisthenes, even this tradition did not carry the series of observations in question beyond the date of the Dispersion: from which it will follow that the Chaldeans had still preserved an authentic chronology from the time of the Dispersion to that of Alexander, and one entirely in unison with the testimony of Scripture itself.

Again, the æra of Nabonassar is the beginning of history at Babylon. All before that is fable, or truth mixed up with fable. But Nabonassar himself is an historical character; and so are his successors. Now the tradition connected with the rise of this æra at Babylon deposes that Nabonassar purposely obliterated all records and monuments of time, prior to his own accession; in order that a new and original reckoning might bear date from the beginning of his reign. We may have occasion to inquire more narrowly into the authenticity of this tradition, if we ever come to treat of the Babylonian calendar. The fact itself is certain; that the æra, known by the name of the æra of Nabonassar at Babylon, bears date from the beginning of the reign of this king there; and that there is no Babylonian æra so well known to history as that.

The peculiar circumstance which is most deserving of remark with respect to the origin of this æra is, that just at the beginning of this æra, and consequently just at the time of the accession of Nabonassar also, the primitive equable calendar was returning to the same relations to the natural and to the Julian reckoning of annual time as at the epoch of the Dispersion. This may be seen at once from our general tables. At the epoch of the Dispersion, one hundred years after the deluge, B. C. 2247, Æra cyclica 1759, the primitive Thoth was falling on February 23: at that of the æra of Nabonassar, Æra cyclica 3259, B. C. 747, it was falling on February 25; that is, within two days only of February 23. The Chaldees attached too much importance to restitutions (ἀποκαταστάσεις) of every kind, especially those of time,

not to be easily induced to make this coincidence the epoch of an æra; and the beginning of a cycle of the same kind again: and it is far from improbable, under such circumstances, that, if the act which tradition ascribes to Nabonassar, preliminary to the institution of the æra, did really usher it in, it was not a rash or capricious exercise of power, which emanated from his own will merely, but a grave and deliberate measure, concerted and carried into effect with the advice and concurrence of his astrological sages and councillors. How exact however must have been that chronology, which could go back, even at that distance of time, to within two days of the calendar epoch of the Dispersion! And how entirely consistent with Scriptural testimony and with antecedent probability, that at Babylon in particular, and in the observatory of Belus, the beginning of mundane time, or of chronology properly so called, should be the epoch of the Dispersion!

With regard indeed to the Chaldean cosmogony in general, we have still the means of judging of it to a certain extent: and we find that, though largely adulterated with fabulous matter, it contained a considerable share of truth; which could have been derived from no source but revelation, or an authentic primitive tradition. Thus the doctrine of this cosmogony was That the elementary, primordial, or antemundane state of things was *water* and *darkness*. What was that but the Scriptural representation of the period immediately prior to the Mosaic creation, *darkness* and the *deep?* In this cosmogony, this aqueous origin of things was personified under the figure of a female, whom it called Omorca or Omarca: a term interpreted to mean Thaladth or Thalassa, the Greek word for sea. It taught further, that the first step towards the actual production of the existing state of things out of these elements of water and darkness was the division of this Omarca into two halves: one of which became the dry land, the other the sea: a division which it attributed to the act of a distinct and independent principle *ab extra*, to which it gave the name of Bel or Belus, the same in the Chaldaic as Bal or Baal in the Hebrew, and each denoting Lord or Master; and in the theology of the Chaldees of after-times generally understood to be applied to and intended of the sun. What was this too but the operation of the third day of the hexaë-

meron, in the division of the terraqueous globe into its two principal component parts, the continent and the sea?

There are other points of resemblance between the Chaldaic cosmogony and the Scriptural account of the origin of things, which we cannot stop to specify at present. We will conclude with one more observation.

The astrological system of antiquity was distinguished by a particular doctrine; viz. that of a cycle of things, in which destruction and reproduction necessarily followed and succeeded to each other; water being the instrumental means of this destruction at one time and fire at another. It is easy to see that the first idea of this doctrine must have been derived from the catastrophe of the deluge; which was an historical fact, well remembered by all the postdiluvian world, and for a long time after the event. It is possible too that the Scriptural doctrine of a future destruction of the world a second time, by fire and not by water, might have been communicated to the postdiluvian race of men; which would account for this association of fire with water in the same cycle of destruction and reproduction; and as the predestined means of the same kind of catastrophe, in the next instance of its occurrence.

But whatsoever may have been the real foundation of this doctrine, the form which it assumed in the hands of the astrologers was eminently characteristic of their science; more especially with regard to the producing causes of the destructive agency in each instance, and to the time and the circumstances at which and under which it was to be developed and brought into action; viz. That an union of the planets in the house of the moon, that is in Cancer, brought about by their respective motions, would be followed by an universal conflagration; and a similar union in the house of Saturn, that is in Capricorn, similarly produced, would be succeeded by an universal deluge.

There can be no doubt that this doctrine is Chaldaic in its origin. In fact, we are able to trace it directly to Chaldea. Now the deluge of Noah, as we have observed, was an historical fact, of which no nation of antiquity preserved the recollection longer or more distinctly than the Chaldees; as their fabulous chronology itself from Alorus

to Xisuthrus proves. If they did not ultimately derive the very idea of this cycle of destruction, first by water and then by fire, from the deluge of Scripture; they connected it at least, from the first, with the deluge of Scripture: and they sought to give credit and authority to the doctrine itself by assigning even to the deluge of Noah a date, which turns out on explanation to be that of the winter solstice, the very middle of the house of Saturn, i. e. of this formidable sign of Capricorn; when according to their own principles the element of water must be in the ascendant; and when, and when only, such a catastrophe, as the destruction of the world by a flood under any circumstances, was to be expected.

SECTION V.—iii. *On the Bactrian and Persian tradition.*

It has long been the belief of the Parsees, (who represent in modern times the ancient professors of the Magian philosophy of Bactria and Persia,) that the point of the vernal equinox was the epoch of mundane time; that the motions of the sun and of the rest of the heavenly bodies were all to be dated from the first entrance of the former into the first degree of Aries. The religion of Mahomet, however opposed to that of Zoroaster in other respects, was in harmony with it on this point [o]; and the beginning of time at the vernal equinox is an article of faith with the Mahommedans of Persia as much as with the Parsees.

This general persuasion of the Persians concerning the origin of time was the moving cause of the Gelalæan correction of the calendar in Persia, in A. D. 1079. It prompted the intended correction of Yezdejerd, in A. D. 632, at the end of the first great period of the Gjemschid calendar. It led to the restoration of the old rule of the Persian Nauruz, in the reign of the third of the Sassanidæ, 600 years after it had fallen into abeyance; and it was the ultimate cause even of the first or original correction of Gjemschid itself; the object of which was simply to fix the head of the calendar to the season of spring, and nominally to the vernal equinox

[o] Thus Albumasar, an Arabian astronomer A. D. 805–885, (of whom, see Bailly, Histoire de l'Astronomie Moderne, tome i, Eclaircissemens, Liv. v. § viii. p. 583, 584,) taught that the world was created or began when the seven planets were in conjunction in the first degree of Aries, and would come to an end when they should be in conjunction again in the last degree of Pisces. Cf. D'Herbelot in Abou-Maaschar.

itself; because that was known or believed to be the proper beginning of time.

We have seen reason however to conclude that even the Gjemschid correction of the primitive calendar in Persia was not the first instance of a correction so produced and so intended, in the same part of the ancient world; and that, though this Persian correction in many respects must be considered the work of Gjemschid, yet it borrowed a great deal also from an earlier correction in the neighbouring country of Bactria. The ancients speak of a double Zoroaster, one much older, the other much younger, than Gjemschid; but each of them a native of Bactria: and in our opinion this distinction is well founded; only we consider it probable that the name of Zoroaster properly belongs to the older, and was purposely assumed by the younger. Be this as it may; it is to the first Bactrian reformer and legislator that we must trace the Persian cosmogony, and whatsoever there is to distinguish the theological system of Gjemschid, over and above the administration of his calendar. And we think the date of this Bactrian correction was B.C. 947.

The Persian cosmogony is embodied in the Persian doctrine of Ghahanbârhâs; that is, of cycles, vicissitudes, or turns of times. This doctrine recognised an hexaëmeron, and so far agreed with Scripture; but an hexaëmeron or period of six days, each of them supposed to be equivalent to a certain number of days, and to be spread altogether over the extent of one primitive year of 365 days exactly.

The first of these days was devoted to the production of the heavens, and it was 45 days in length; and when the Julian dates of these different periods come to be defined, it turns out that the date of this first of all coincides with June 24, the date of the summer solstice in the sphere of Mazzaroth; the most likely time of all to have been chosen by the first author of this peculiar system, (in which fire was personified and made the object of worship and adoration,) for the production of the element of fire, and of its visible representatives, the heavenly luminaries.

The second day was dedicated to the production of the waters; another object of reverence to the followers of Zo-

roaster: and this day was of the length of 60 ordinary days. It is found to coincide in its origin with the date of the Babylonian cosmogony, and in particular of the production of the element of water, August 8; which in our opinion is a proof that this Bactrian cosmogony was influenced by a knowledge of the Babylonian; and that might be the case 159 years after the latter had come into existence.

If we trace the rest of the days of this Bactrian or Persian hexaëmeron round the primitive calendar, we find them all distinguished by some peculiarity or other, which serves to fix and define them; and to appropriate them to one season of the year more than another. It is agreed that the *last* only was devoted to the production of *man;* and though it lasted 75 days, it began on the first Epagomene. The date of this last act of the process then must have been April 10; only nine days after the mean vernal equinox for the time being, which at this time was falling on April 1, but in this peculiar system was probably assumed on April 10 itself. Thus we see that according to this Bactrian cosmogony of Zoroaster, though the process of creation began at the summer solstice, it was consummated only at the vernal equinox; and that human existence in particular was dated by it from the vernal equinox.

It is obvious from this account that, in the opinion of this Bactrian reformer, no one season of the natural year was to be considered the proper epoch of the creation more than another; but each of these seasons in its turn. Yet why did he limit these divisions of the natural year, devoted to this purpose in general, to the number of six? and why did he call each of these a day, though consisting in reality of many days, if he had not heard of the actual production of things in six days? And though as the founder of the worship of fire he naturally placed the first development of this principle in its most active and glorious as well as most sensible forms, those of the sun and of the host of heaven, at the summer solstice, when the natural element of fire is on the culminating point of its ascendency; yet he still dated the creation of man at the vernal equinox: he did not venture to assign any period of his hexaëmeron, peculiar as it was, to

this particular purpose of the production of mankind in connection with his own system, but that which really belonged to it *.

* There cannot be much question that the ancient tradition and belief of the Persians connected not only the origin of time, but the origin of things, with the sign of the Bull. In the Bull, the seminal principles of universal nature were supposed by them to have been originally deposited. Mithras himself was typified by the Bull. The signs of the Zodiac in their sphere were discriminated by the letters of the alphabet; and the first of all, the letter A, was assigned not to Aries but to the Bull[b].

It may well be supposed that the first author of the Magian theology and cosmogony was the author of the distinction of principles also, (i. e. of dualism,) so characteristic of that theology; and that Hormuzd and Ahriman were first introduced, (under those names and in that opposition of nature and relation in which they act their respective parts in the Magian cosmogony and theology,) by this first reformer, the elder Zoroaster.

According to the doctrine of the Zendavesta[c], the entire duration of things from no-Being to the consummation of Being was 12,000 years; and 6000 of these elapsed before the appearance of evil, and before the appearance of man; divided also into two halves of 3000 years each, one of them transacted in Aries, Taurus, and Gemini, a thousand years in each, the other in Cancer, Leo, and Virgo, a thousand years in each of these likewise. At the beginning of the next 6000 years, and at the beginning of Libra, evil appeared; and the contest between evil and good which has been going on ever since first began.

Whether this was the doctrine of the elder Zoroaster himself we could not undertake to say for certain; none of his own works having descended to posterity: and yet we are altogether of opinion that it was. The Magian philosophy, according to the ancients[d], certainly taught not only the distinction of principles and the opposition and conflict between them in general, but the particular doctrine also that for 3000 years one was destined to prevail and for 3000 years the other; which must have implied either that the conflict itself having once begun would last for 6000 years in all, and then be terminated, or that it would go on for ever in a cycle of 6000 years, for one half of which good should be triumphant and in the ascendant, and for the other evil.

It is easy to see that the ultimate foundation of these peculiar doctrines rests on facts which in themselves are undeniable, and cannot be disputed;

b Bailly, Astronomie Ancienne, Éclaircissemens, liv. ii. § xii. 317: Astronomie Indienne, ch. ix. § xxxiv. p. 259: Chardin, tome iii. 165. Des Sciences &c. ch. ix. Edition of 1735, Amsterdam.

c ii. 352, 353: cf. Bailly, Astronomie Ancienne, Éclaircissemens, liv. iv. § xliv. 392, 393: Astronomie Indienne, Disc. Prél. ci: ch. viii. § xiii. 219: also the Zend-avesta, iii. 352. note 2.

d Plutarch, De Iside et Osiride, xlvii: Diogenes Laërtius, Proœm. vi. § 8, 9: cf. Herodotus, ii. 123: Pindar, Olymp. ii. 123, and the Scholia in loc.: Plato, Phædrus, Opp. pars i. vol. i. 40—46 =246—249.

On this principle too he must have supposed the first union of the sexes, that is, the institution of marriage, in the spring also; and that would account for a well-attested

though they go far back into the history of the past, and lose themselves in the mysterious secresy of the period anterior to the Mosaic creation and the proper beginning of human history. It is the doctrine of Scripture itself, or most reasonably and most certainly to be collected from it, that evil itself had a beginning; that it is not eternal; that there was a time when it did not yet exist; and yet that its actual beginning is anterior to the Mosaic creation and the beginning of human existence. And what did this Magian doctrine substantially affirm or inculcate, distinct from that?

We much question however whether the particular meaning of the distinctions above laid down, concerning the transaction of 6000 years, before the appearance of evil and before the beginning of the present state of things, one thousand of which was supposed to have been passed in each of the signs from Aries inclusive to Virgo inclusive, has ever been properly understood; or ever could have been, without certain explanations which have not accompanied the simple statement of the doctrine itself; and without the knowledge of certain facts which hitherto have not been known to the learned. The astrological system of the Chaldeans is older than B. C. 947, our assumed date of the time of this elder Zoroaster. In this system every sign of the ecliptic was treated as if it were a complete ecliptic in itself; consisting of twelve signs, and under the same names, as much as the ecliptic itself. Each of these minor signs contained, consequently, 2 degrees and 30 minutes of the ecliptic itself; and every sign had 12 of these subdivisions, in the order and under the names of Aries, Taurus, Gemini, and the rest, like the ecliptic itself. Along with this astrological system also, as we shall see, we trust, hereafter, a doctrine was introduced, of a double movement of the cardinal points, one *in consequentia*, according to the order of the signs, the other *in antecedentia*, contrary to the order of the signs; one consequently the reverse of the other, yet both at the same rate, and both going on together: one of these too proper to the cardinal points of the sphere of Mazzaroth, the other to those of the tropical sphere.

On these foundations this Magian reformer of Bactria, the elder Zoroaster, seems to have constructed a system of his own; not altogether the same with this, and yet evidently derived from it. The limits of the first sign in the sphere of Mazzaroth, cyclically reckoned, were March 26 and April 25; the latter of which, as we have seen, was the true epoch of mundane time itself. Assuming these limits of March 26 and April 25 as fixed and impassable terms, and the space comprehended between them, (30 degrees,) as divided into 12 equal parts of 2° 30′ each, called by the names of the 12 signs respectively, he supposed the simultaneous commencement of two such movements as we have described; one from this term of April 25 *in antecedentia*, the other from the other of March 26 *in consequentia*; which

custom of the ancient Persians, which it would not be easy to explain without the knowledge of these facts; viz. that of celebrating marriages at the vernal equinox, in preference to any other season of the natural year.

### Section VI.—iv. *On the Indian or Hindu tradition.*

The more we inquire into the theological and the mythological systems of antiquity, the more proofs shall we discover of the influence of Egypt; and the more shall we be convinced of the fact that no movement originated in that country the impulse of which was not propagated sooner or

went on for 6000 (equable) years, at the rate of one degree in 400 years, or one of the signs of 2° 30′ each, such as we have described, in 1000 years; and consequently over six of these signs in order, reckoned from March 26, the assumed epoch of the sphere of Mazzaroth, Aries, Taurus, Gemini, Cancer, Leo, and Virgo; before the appearance of evil, before the creation of man, and before the beginning of the present system of things. This, it appears to us, is what he meant by his 6000 years; each thousand of which was transacted in one of these signs respectively, before the appearance of evil. Each of these thousand years was the measure of the two motions, (in particular that in the sphere of Mazzaroth, and in the order of the signs,) through one of these signs themselves. At the end of these 6000 years, it is evident, the two movements must meet, and come into conflict; and that at the beginning of the seventh sign in this division, the sign of Libra; the seventh sign both in the order *in consequentia* and in the order *in antecedentia*. Having met, and yet being contrary one to the other, they could not go on together; yet which must give way to the other? On this coincidence and conflict of the two momenta, the author of this theory seems to have founded his peculiar notion of the origin of *dualism*, and of the opposition of principles, at this particular period; the end of these first 6000 years of his system. The middle day between March 26 and April 25 is April 10: and therefore the date of this encounter of the two momenta, and of the struggle which followed upon it, including the origin of the present system, in which evil appears to be so universally opposed to good, would be April 10: the very day, as we have seen, on which the first of the cyclical Epagomenæ, B. C. 947, was falling. This coincidence seems to have determined his correction of the primitive calendar at this particular point of time. April 10, the fifteenth day from March 26 on one hand, and before April 25th on the other, the first common term of these two momenta, would appear on every account the fittest term for the epoch of his correction of the calendar also. It is remarkable at least, that this is the date assigned in his system to the creation of man.

later over almost all the earth. Great indeed is the responsibility attaching to ancient Egypt; not only as the source of corruption to itself, but as the misleader and perverter of the rest of the world, which its example seduced and led astray.

The history of the calendar and of its various changes brings many proofs of this influence to light; and these discoveries are among the most important and the most interesting fruits of our researches. Who would believe, *a priori*, that the fable of Osiris and Isis should no sooner have been invented in Egypt and associated with certain rites and observances there, than that the very same fable, attended with similar observances signalized and perpetuated by similar changes and corrections of the calendar also, critically accommodated to what had taken place in Egypt, in less than 50 years afterwards should be found, merely in a different dress and under a different name, in India, Phrygia, Cyprus, Arabia, Greece, and elsewhere? in quarters of the world greatly removed from Egypt, and between which and Egypt we should not have supposed that, at this early period of the history of each, there could have been any communication. The fact to which we allude however is certain; being attested by the evidence of the calendar itself.

At present, as our subject requires, we must confine ourselves to the influence exercised by Egypt over its contemporaries in a much less objectionable way; i. e. as the centre of knowledge and science; where all great and useful discoveries, all influential and permanent changes, in the principles or details of the reckoning of time, first took their rise; and from whence they were extended to the rest of the world. The sphere of the Egyptians, the lunar mansions of the Egyptians, the Julian calendar of the Egyptians, the Apis cycle of the Egyptians, all sooner or later passed from them to their neighbours; and in particular that distinction of the sphere itself, (which we have explained,) into a fixed and a moveable one. This distinction, once sanctioned by the authority of Egypt, appears to have been received as a principle every where else: the example and authority of Egypt in that respect conspiring with the general belief of

antiquity, that the epoch of this division of the sphere, especially of the sphere of Mazzaroth, was the proper epoch of time itself.

This sphere of Mazzaroth among the Egyptians was attached to a fixed Julian date; and at stated times it was reckoned at 366 days. It was subject consequently to the laws of the Julian calendar. It is not probable that the Egyptians themselves intended it to represent the sidereal year, which they very well knew to be greater than the Julian. It was easy however to regard it in that light; particularly as attached to an invariable term, and as contradistinguished to a tropical or moveable sphere perpetually.

Now we have already had occasion to explain[e] in what manner the Indian astronomers in B. C. 946 discarded the cyclico-Julian rule of their calendar, and began to administer it on a different principle; which required them to advance the epoch at the end of every 247 years, or 13 Metonic cycles, 28 or 29 days: and how they persevered in this system of administration for 1483 years; until by means of six successive corrections of this kind they had brought up the head of the calendar from October 1 (B. C. 946) to March 22 A. D. 538. The fact of these six corrections, and that they were actually made one after another, is certain. It is certain also that, the last of them having taken place in its proper order of time, nothing of the kind has been repeated. Thirteen hundred years have elapsed from A. D. 538 to the present day; yet it does not appear that the Hindu calendar has ever been subjected to the same kind of correction again. We cannot hesitate therefore to conclude that when the administrators of this calendar, at the expense of so much time and patience, had attained to this term of March 22, they had attained to the object at which they were aiming all the while.

What then was this? The calendar itself will best answer that question. It is peculiar to it ever since this last correction of A. D. 538, to have been subjected to the sidereal not to the tropical year. And as the sidereal year is almost as much greater than the mean Julian year, as the

[e] Supra, Diss. vii. chap. iii. sect. vii. ii. vol. i. 581.

mean Julian year itself is than the mean tropical; it is peculiar to this calendar also, ever since it was attached to this Julian epoch of March 22 A. D. 538, to have exhibited the phenomenon of a gradual advance upon it in terms of the Julian reckoning of annual time; so that at present its Julian epoch is April 1 or 2 old style, instead of March 22.

We may conclude then that the ultimate intention of the Indian astronomers, after they should have brought the head of their calendar into contact with this fixed Julian term of March 22, was to regulate it by the sidereal year; to consider and treat this epoch of March 22 as the beginning of a new reckoning of time in terms of the sidereal year. But why did they fix on this Julian term of March 22, in that capacity? One reason no doubt was because March 22, at the end of the last period of 247 years, coincided with the *luna septima;* to which the head of the calendar had been purposely attached all through these corrections in succession, beginning with the first, October 1 B. C. 946. But we have no doubt that another, and a still more influential, one was because March 22 at this time was the proper representative of the epoch of the sphere of Mazzaroth. That epoch at first was March 24: but March 24 would necessarily drop to March 23, after B. C. 672; and supposing March 23 reckoned from sunset March 22, according to the primitive rule, the change in the rule of this reckoning made in India, from sunset to sunrise, might require it to be reckoned from March 22 at sunrise, which was the actual epoch of this final Indian correction March 22, A. D. 538. It is sufficient however to explain the choice of this epoch at this time, and especially as that of a sidereal calendar, that it was coinciding as nearly with the original epoch of the sphere of Mazzaroth, as the circumstances of the case would permit.

Each of the Indian ages, according to their own account, was consummated by a deluge: and this deluge at the end of each, an universal deluge. And each in like manner was ushered in by a new creation, after that destruction of a former so effected[f]. It would be difficult to say on what

[f] Bailly, Astronomie Indienne, Discours Prélim. cii: see however the note to the "Researches of the baron de Humboldt, i. p. 30 (ii. 235 notes.) This was the doctrine of some of the *Shastras*. According to other repre-

foundation such a representation of a constant order and succession of things could ultimately rest, except on the Scriptural fact of *one* universal deluge at least, followed by *one* new order of things; and so far a new creation such as is here supposed. Mr. Bentley has shewn that the Indians had an æra of creation, the first of their four ages, and called the *Krītā*; (an æra older than any of their fabulous ones of later introduction, which are utterly destitute of credit;) the agreement of the epoch of which with the Mosaic epoch of the deluge, (according to the Hebrew Bible,) was surprisingly close [g].

We may observe, in the last place, that it is not peculiar to the Hindu calendar to have been studiously attached to the spring and to the month of March; and purposely subjected to the sidereal year. The same phenomenon is exhibited by the Siamese calendar. The Siamese have a lunar calendar, the epoch of which, as we have already explained [h], was originally Nov. 29, B. C. 545. This calendar is properly their civil calendar; and they have never ceased to use it in that capacity from B. C. 545 to the present day. But they have also an astronomical calendar; the year of which is sidereal, and the epoch of which was March 21, A. D. 638 [i]. This Siamese correction then was one hundred years later than the last of the Indian, A. D. 538: and it was attached to the same date as that, within one day, March 21; no doubt for the same reasons in this instance, which had determined the choice of the epoch, March 22, in the former.

## SECTION VII.—v. *On the Chinese tradition.*

We may judge of the nature of the primitive tradition among the Chinese, relating to the origin of things, and to the season of the year from which the reckoning of mundane time was to be dated, through the epoch assigned to their calendar, as supposed to be carried back to the time of *Tchouen-Hiu*, or *Kao-yang*, the father of *Yao* himself [k]; the

sentations, the first race perished by water; the second by tempests; the third were swallowed up by the earth; the fourth is destined to perish by fire.

[g] Hindu Astronomy, p. 76. part. i. sect. v.

[h] Supra, Diss. vii. ch. iii. sect. vii. iii. vol. i. 582.

[i] Bailly, Astronomie Indienne, ch. i. § xiv. p. 11. p. 1–30. Cf. xxvi. 21, 22. ch. v. § iv. p. 100: also, Astronomie Moderne, Liv. vii. § xviii. 283, Éclaircissemens, v. § xli. p. 613–615.

[k] Gaubil, Traité, p. 10–12.

beginning of whose reign is dated by Gaubil B. C. 2514. This epoch is the 15th degree of Aquarius; the nearest conjunction to the 15th degree of Aquarius.

Such is the first and original epoch which the Chinese themselves have assigned to their calendar. It is easily explained by the fact that both the correction of February 25, B. C. 742, (if that must be called a correction, which consisted merely in the association of the Apis cycle with the preexisting solar year,) and that of February 16, B. C. 657, were attached or supposed to be attached to the same epoch also, the nearest conjunction to the middle of Aquarius; and in China the middle of Aquarius is the beginning of spring: so that as attached to this epoch the calendar was attached or supposed to be attached to the beginning of spring *. No epoch of civil time in China is better attested than this; nor

* The beginning of spring has been supposed in China from time immemorial to coincide with the middle of Aquarius; about 45 days after the solstice of winter, and about 45 before the equinox of spring: to which point they give the name of *Li-tchun* [l]. The sign of Aquarius itself in the Chinese language is called the Resurrection of the spring [m].

With regard to the different forms of the calendar, at different times, in China; the Chinese themselves speak only of *three*, anterior to the correction of B. C. 206, under the dynasty of Han [n];—the calendar of the dynasty of *Hia* [o]: the calendar of the dynasty of *Chang* [p]: and the calendar of the dynasty of *Tcheou* [q]. In the Lettres Édifiantes, the calendar of Chang is represented as that of the emperor Tchingtang, destroyer of the dynasty of Hia [r]: and Chang was the name of the dynasty founded by this emperor [s] in B. C. 1760 or 1766, according to Gaubil [t]. The calendar of Tcheou, in like manner, is that of Ououang (or Vouvang in the Traité) who superseded this dynasty of Chang by that of Tcheou, according to Gaubil, in B. C. 1111 [u] or 1122.

Among these the most ancient, according to their own accounts, and the most general, was the first; which they represent even as the calendar of Yao himself [x]. In this, the first moon was always the first of spring; that is, properly the moon of Pisces; the next to this, the moon which coincided with the vernal equinox. Such would be the state of the case, and

l Cf. Gaubil, Traité, p. 102. 21. 39, 40. Martinius, Historia Sinica, i.; Imp. iii. p. 28. 30: Imp. v. p. 33.

m Bailly, Astronomie Ancienne, p. 521: Éclairc. Add. Liv. iii. § xi. p. 76. Cf. Martinius, i: Imp. v. 34.

n Gaubil, Traité, 71, 195, 196.

o Ibid. 21, 98, 99.

p Ibid. 25, 98, 99.

q Ib. 34. 98, 99. 243.

r See tome xxvi. 112. 114. 117. 119, 120. 215. 219. Cf. 98.

s Ibid. 112. 116. 215.

t Ibid. 111, 112. Cf. Traité, p. 25.

u Ibid. 119. 139, note 1, 219. Cf. 166. 182. 195: Traité, p. 34.

x xxvi. 81, 82: 87, 88: 103, 104–106 Traité, 21. 98, 99: 12. 16.

any one more uniformly represented as the first and oldest of all. "Rien n'est plus célèbre," observes Bailly [y], "dans l'histoire Chinoise que le calendrier de l'empereur Chueni. C'est lui qui a voulu que l'année commençât à la lune la plus proche du premier jour du printems qui arrive vers le quinzième degré du Verseau." The learned in Chinese antiquity are agreed on this point.

The selection of this epoch however cannot be attributed simply to the coincidence of the beginning of spring in China with the middle of Aquarius. Something, and probably much more, must be allowed to the traditionary belief of the Chinese also that the beginning of spring was the beginning of things; and that human time in particular was to be dated from that season of the year. The Chinese have a cosmogony of their own; which so far agrees with that of Scripture that according to this too the antemundane state of things was one of chaos [z]; and *Pan-kou*, the Chinese Adam, the first of the human race in this cosmogony, was born in the midst of this chaos: and, as some traditions represented it, on the 16th day of the month [z]. And, beginning with this first man

such the relation of the moons of the calendar to the natural year, at the epoch of the Apis cycle peculiar to the Chinese, Feb. 25, B. C. 742.

In our opinion however all these traditions, respecting the form assumed at different times by the calendar, are ultimately to be referred only to the final correction of Feb. 16 B. C. 657. This and this only is the true type of the calendar of Hia; to which the precedence in point of antiquity and of authority too is so unanimously assigned by the Chinese themselves, above the other two.

The relation of these different forms of the calendar one to another, the standard of reference being supposed to be this of *Hia*, may be represented as follows:

B. C. 658—657.

| Calendar of *Hia*. | Calendar of *Chang*. | Calendar of *Tcheou*. |
|---|---|---|
| xi month Dec. 19 | xii month Dec. 19 | i month Dec. 19 |
| xii month Jan. 17 | i month Jan. 17 | ii month Jan. 17 |
| i month Feb. 16 | ii month Feb. 16 | iii month Feb. 16. |

So that the i of Tcheou was the xi of Hia and the xii of Chang: the i of Chang was the xii of Hia and the ii of Tcheou: the i of Hia was the ii of Chang and the iii of Tcheou: and so on. Cf. the Lettres Édifiantes, xxvi. p. 166. 182. 195. 215. 219. 114. 139.

[y] Astronomie Indienne, Discours Prél. cli. Cf. ch. viii. § iv. p. 212.
[z] Gaubil, Traité, p. 2. 170.

Pankou, their annals exhibit a series of reigns down to the time of *Fouhi*; in the reign of whose sister *Nu-oua*, (a name very like the Scriptural one of Noah) they dated the flood[a]. And yet their dynasties properly so called, and consequently their historical chronology, such as it is, did not begin before the reign of *Hoangti*[b], the grandfather of *Tchouen-Hiu* or *Kao-yang* himself; in whose reign, as we have already observed, the calendar is supposed to have been first attached to its fixed epoch of the nearest conjunction to the middle of Aquarius.

The historical tradition of the Chinese then in strictness did not go further back than the deluge. It appears to have been long remembered among them that, at the epoch of the deluge, the head of the primitive calendar was falling very near this fixed term of the middle of Aquarius; and therefore that the reckoning of historical time must be dated from the middle of Aquarius, which in their country was the same thing as the beginning of spring. In the same spirit, and with the same object in view of characterising this assumed epoch of the proper beginning of time by a still more striking and remarkable coincidence, they imagined the famous conjunction of the five planets in the reign of this same emperor, *Kao-yang*, and at the epoch of the calendar thus attached to the 15th degree of Aquarius; and on the very day of the first lunar conjunction according to this calendar in the 15th degree of Aquarius itself: a conjunction of planets which the learned in modern times have endeavoured to discover, some in B. C. 2012, some in B. C. 2446[c], but which Gaubil expressly declares cannot be discovered nor verified subject to the conditions prescribed; and which he does not hesitate to pronounce to be altogether fictitious, and merely assumed to serve a chronological purpose.

It is observable that both these conjunctions, both the planetary and the lunar, were dated in the Chinese constellation Che or Xe[d]. Bailly has extracted from the Chinese history of Mailla the following passage relating to them, which we quote after him[e]: "Après plusieurs années de tra-

[a] Traité, p. 1–7.
[b] Ib. p. 8, 9.
[c] Bailly, Astronomie Ancienne, Éclaircissemens, Liv. iii. § xxviii. p. 345–347.
[d] Traité, 269, 270. Cf. p. 11.
[e] Astronomie Indienne, ch. ix. § ix. p. 235.

vail, Tchuen-hio détermina qu'à l'avenir l'année commenceroit à la lune la plus proche du premier jour du printems, qui vient vers le 15° du Verseau; et comme il savoit par le calcul qu'il en avoit fait, que dans une des années de son règne les planètes devoient se joindre dans la constellation Xe (constellation qui occupe 17° dans le ciel, et dont le milieu est vers le 6° des Poissons,) il choisit cette année-là pour la première de son calendrier, d'autant plus que cette même année le soleil et la lune se trouvoient en conjonction le premier jour du printems." Now at the actual date of the true correction of their calendar, B. C. 657, this constellation Che was falling in Aquarius, and very near the middle of Aquarius; though at present it is falling in Pisces: and such coincidences as these, it is evident, are of material importance to the question of the true history of the Chinese calendar, and to that of the mixture of fable with truth which has characterised its history from the first. It is much to be doubted however whether the true meaning of this fixed term, the 15th degree of Aquarius, as thus assumed and laid down by the Chinese, has ever been understood by modern astronomers or chronologers; or rather, if it was really intended, (as we apprehend it was,) from the first, of the 15th of Aquarius in the sphere of Mazzaroth, not in the ordinary sense of the sphere; it is impossible that it should ever have been properly understood.

Now in this sphere of Mazzaroth the fixed date of Aquarius, before B. C. 672, was January 22; after it was Jan. 21: and therefore the date of the 15th degree of Aquarius, before B. C. 672, was February 5, after it was February 4. On this principle, the first lunar conjunction in the fifteenth degree of Aquarius, and the planetary conjunction of the same date, at so remote an epoch as that of this supposed fixation of the calendar in the reign of Tchouen-hiu, or Kao-yang, ought to be sought for and found (if at all) on February 5. Gaubil dates the accession of this king in B.C. 2514: and two years after, B. C. 2512, as our general lunar calendar shews, there was actually a lunar conjunction on February 5; which would thus coincide with the standing date of the 15° of Aquarius in the sphere of Mazzaroth. The Chinese of after times were competent to discover this coincidence by carry-

ing back the lunar reckoning of their own time far enough; and very possibly too their false astronomy and their mistaken calculations of the planetary movements might find a planetary conjunction on or about the same day: and we should thus explain the origin of both the traditions connected with the rise of their calendar in the reign of Kao-yang, both that of the lunar and that of the planetary conjunction on the same day, in the 15° of Aquarius, and in the constellation Che*.

We may conclude our remarks on this subject for the present with observing that this fixation of the epoch of the civil calendar to the nearest conjunction to the middle of Aquarius is not peculiar to the Chinese. It is equally cha-

* There is a passage in the Chinese astronomy of Gaubil, from which it may be inferred that the Chinese had preserved among them a correct tradition of the origin of time itself.

"On parle," says he[s], d'un auteur (note, here subjoined, "il étoit avant l'incendie des livres, i. e. B. C. 213) qui vivoit au temps appellé temps du *Tchen-Koue*. Cet Auteur disoit que le soleil alloit d'orient en occident; le commencement de son mouvement étoit à la constellation *Nieou* (Capricorn). Il disoit que la terre alloit d'occident en orient, et le commencement de son mouvement étoit aux constellations *Pi, Mao*.

"L'auteur Chinois qui rapporte ce que je viens de dire, ajoute que selon un auteur qu'il cite une des cérémonies de la secte de *Tao*, étoit pour la terre, (c'est-à-dire, son esprit,) comme commençant son mouvement aux constellations *Pi, Mao;* c'est-à-dire entre les deux constellations.

"Ou voit, dans un fameux astronome Chinois appellé *Tching-hiuen*, qui écrivoit quelque temps après J. C. quelque vestige de connoissance ou tradition sur un mouvement de la terre, mais cela est si confus qu'on ne voit pas bien ce qu'il veut dire."

This passage cannot be properly understood without a knowledge of the history of the lunar mansions among the Chinese. Suffice it to observe at present that these mansions were received by the Chinese from the Egyptians; yet were set back by them as soon as received to the time of Yao, as the same with the epoch of these mansions, B. C. 1847. *Mao* was the first mansion, *Pi* the second. The longitude of the first star of Pi, A. D. 1700, according to Gaubil, (Traité, p. vi) was 64° 14′ 59″: and consequently B. C. 1847, at the rate of precession assumed in our tables, it was 14° 55′ 52″: and Pi, the constellation, at that time was coinciding with the 15° of Aries. The longitude of Pi the mansion at the same time was 12° 51′ 26″: and the date of this mansion at the same time was April 21. The movement of the earth, on this principle, dated on the confines of Mao and Pi, would be dated April 21.

s Lettres Édifiantes, xxvi. 241.

racteristic of the Japanese: and the Japanese have always adhered to this epoch; the Chinese have shifted theirs from the middle of Aquarius nearer to the winter solstice. Whether the Japanese were a colony of the Chinese appears to be a doubtful point. Kæmpfer at least is not of that opinion. There is no doubt however that they have always kept up an intercourse with China; and that colonists from China at different times have settled among them. The Chinese cycle of 60 years is in common use among the Japanese; and its epoch in their style is the same as in the Chinese, B. C. 657. Under these circumstances, it might be supposed that the Japanese calendar was borrowed from the Chinese: but that supposition is disproved by the fact that the Japanese calendar is three years older than the Chinese; and so far it would be more reasonable to suppose the latter was borrowed from the former, than *vice versa:* though the most probable supposition is that neither was borrowed from the other, notwithstanding the close approximation of the epoch of each to that of the other. In this characteristic circumstance however, of being attached at first to the nearest lunar conjunction to the 15° of Aquarius, but to the 15° of Aquarius as reckoned by the rule of the sphere of Mazzaroth, they agreed; which will appear at once, as soon as it is known that the date of the Japanese calendar was Feb. 19 B. C. 660, and that of the Chinese Feb. 16 B. C. 657. This Japanese correction goes back to the epoch of the æra of Synmu among them, the founder of the line of their ecclesiastical dynasty of princes; and this is their oldest æra; the æra in which their historical records have all been kept, and which is still the only authentic æra in use among them. Synmu, the founder of the hereditary line of the kings of Japan, from whom this æra takes its name, was the reformer of their calendar also: so that it is nothing extraordinary that the epoch of the calendar should be the epoch of the æra, and *vice versa.* The remarkable circumstance is that just at this time, B. C. 660, Æra cyc. 3347, the first of the primitive Thoth was falling on Feb. 5, on the 16th of Aquarius reckoned from Jan. 21, on the 15th reckoned from January 22; and also on the *πανσέληνον* or full moon—dated from Jan. 21. And this coincidence appears to have

determined the choice of that year, as the date of the Japanese correction; though this correction itself was attached to the lunar conjunction next ensuing, Feb. 19, the 15th of Thoth; not to the full moon immediately preceding, Feb. 5 the 1st of Thoth. It is certain however that this Julian term of February 5 has served as a standard of reference for this lunar correction ever since; and that the rule still is to date the annual reckoning of the lunar calendar from the nearest conjunction to Feb. 5[t]. The calendar itself is regulated by the Metonic cycle; and as it was originally attached to Feb. 19, though that day is no longer the proper head of its reckoning, but instead of that, Feb. 11, it still maintains the same kind of relation as ever to this fixed term of Feb 5; which it neither exceeds nor falls short of beyond certain limits. With respect to this term itself; it is as we have already observed the representative of the 15th of Aquarius; and must have been deliberately fixed upon in that capacity by the author of the correction. There is reason in fact to believe that he associated a Julian calendar with this lunar one from the first; the epoch of which he attached to January 22; that is, to what might be considered the proper date of the 1st of Aquarius itself. In such a calendar Feb. 5 would ever after be a fixed date, the same in terms with itself perpetually; and always the representative of the fifteenth degree of Aquarius, in the same sense as Jan. 22 of the first.

### SECTION VIII.—vi. *On the Phrygian, Trojan, Lydian, Thracian, and Phœnician tradition.*

There is scarcely a correction of the primitive calendar in former times which can be recovered with greater certainty than the Phrygian correction of Midas. Now though the primitive Thoth in the year of this correction, B. C. 1302—1301, was falling on July 10, and Athyr 17, (the term specially regarded in such corrections, in other instances of the same kind at least,) was falling on September 24; the epoch of this Phrygian correction in particular was fixed to March 31. But the orgies or mysteries of Attes (Attis or Attin) and

[t] Kæmpfer, vol. i. p. 155. 157. B. i. ch. ii: cf. ch. iii. p. 159: ch. v. p. 200: Bailly, Astronomie Ancienne, p. 251: Éclaircissemens, (Additional to) Liv. iii. § xi. p. 75.

Cybele were attached to March 26; that is, to the same season of the year as the head of the calendar itself, but five days earlier. And these five days in this instance were the Epagomenæ of the Phrygian correction; which were annually devoted to these sacra Phrygia, the mysteries of Attes and Cybele. The correction was intended for the sake of these mysteries; and these mysterious powers, in honour of whom they were celebrated, were the two cosmogonic principles of the Phrygian theology, analogous in every respect but that of name to the Osiris and the Isis of the Egyptian. There can be no question that these rites were purposely appropriated to the spring, (and nominally even to the equinox of spring,) because of the primitive Phrygian tradition that no season was so fit for the natural operation of these principles as the spring; and that the first effect of both in conjunction, in the production of the existing system of things, took place in the spring. Nor is it without a significant meaning, that the positive date of these sacra Phrygia in the first instance, and ever after too in the normal or rectified state of the calendar, March 26, was only two days later than the Egyptian epoch of Mazzaroth.

And as there is reason to believe that the Trojan correction of Dardanus, and the Lydian correction, whosoever was the author of that, and the Thracian correction of Orpheus, were distinguished by institutions altogether the same as these of Midas, and took place either concurrently with his, or at a definite interval of time after it; that the principle of all these corrections and of every thing connected with them was the same; and that the rites and ceremonies by which they were all alike accompanied and all alike signalized had the same secret meaning in each instance: the inference from these facts appears to us to be necessary; viz. that the *tradition* of all these systems too was the same, and in the apprehension of the authors of each pointed so directly to no season of the year as the spring.

Forasmuch too as it turns out on inquiry that, though at a considerably later point of time, the same Phrygian doctrine of the union and mixture of the cosmogonic principles of nature, and the same correction of the primitive calendar, and the same rites and ceremonies in conjunction

with both, were actually adopted first at Sidon and afterwards at Tyre; we infer from this coincidence also that neither the Sidonian nor the Tyrian tradition, concerning the origin of things and the *natale mundi*, could have differed from the Phrygian. All must have dated the first operation of the cosmogonic powers in the spring; and we may add at the vernal equinox itself, only as reckoned according to a particular or positive rule.

### Section IX.—vii. *On the Arabian tradition.*

There was a double cyclico-Julian correction of the primitive calendar among the Arabians. One of these was much older than the other; its date, as we have seen reason to conclude, having been Athyr 17 Æra cyclica 2705, Sept. 24 B. C. 1302: in which circumstance of its origination it agreed with several others of the same kind made at the same time, as may be seen from our general list[u]. It was peculiar to this earliest Arabian correction to be associated also from the first with the worship of Ourotalt and Alilat, the two cosmogonic principles in this Arabian system, answering to Osiris and Isis in the Egyptian; and no doubt also to be connected with rites and ceremonies, as proper for the relation of Ourotalt and Alilat in this system, as the Isia were for that of Osiris and Isis in the Egyptian. For the first idea of these Arabian divinities was derived from the Egyptian conception of Osiris and Isis; and this very correction of the primitive Arabian calendar associated with them was made after the model of the Isiac correction of the Egyptians: as the term fixed upon for the epoch of the correction, Athyr 17, the stated date of the Egyptian Isia, serves to prove. In other respects no principle appears to have been involved in this first correction, or to have found its expression therein, calculated to reflect any light on primitive Arabian tradition concerning the beginning of things; only that the autumnal equinox itself in Arabia is the natural season of a second spring.

With regard however to the second correction of the same kind; it was attached to the spring, and as nearly as possible to the vernal equinox; to the epoch of Mazzaroth at

[u] Vol. i. 586.

least, March 23 and 22, B. C. 583. In this correction we have probably a clear intimation of the nature of the primitive Arabian tradition, respecting the beginning of things; especially as this correction appears almost to have superseded the former; and the ultimate source of the calendar of Hej'ra itself, as we have already explained[w], was this and not the former.

It may be questioned however whether the genuine Arabian tradition went further back than the deluge; or pointed to any beginning of things but that which must be dated in the year after the flood. The Arabians had an æra of the deluge; though in the form in which it has been handed down by them, and as attached to the particular epoch of February 18 B. C. 3102[x], it appears to have been borrowed from India, where this is the epoch of the Kali Yuga[y]. They would not however have borrowed this æra from any quarter, had it not fallen in with their own traditions. And here we may observe that both in their lunar calendar, older than the time of Islamism, of which we have already given some account[z], and in the calendar of Hej'ra also, there was and is still a month which bore and still bears the name of Rajeb. It is one of the months called Harram or Sacred; of which there are four in their calendar; and the second of these, in the order of occurrence at present, is Rajeb. Before the conversion of the nation to Mohammedanism, it was the month also of the stated fast, which is now regularly kept in Ramadân.

When the meaning of this name comes to be investigated, it is found to denote *fear* or *dread*. Rajeb was the month of *fear*; the month of apprehension and alarm, for some reason or other; and of extraordinary alarm and apprehension too. The Koran and the commentators upon it throw light on this ominous character of the month, by giving us to understand that the deluge itself happened in Rajeb: that Noah entered the ark on the 10th of Rajeb. It follows that Rajeb in the opinion of the ancient Arabians answered to the second month of the primitive calendar, which was the true month

[w] Appendix to Diss. viii. chap. i. sect. iii. ii. vol. i. 677.

[x] See Halma's Ptolemy, Opp. iii. Memoir of Mr. Ideler, "Sur l'ère des Arabes," p. 32, 33.

[y] Bentley, p. 86–96.

[z] Appendix to Diss. viii. loc. cit.

of the event of the flood; on the 10th of which Noah entered the ark, and on the 17th of which the flood began. And though it is the seventh month in the calendar of Hej'ra at present, and was the ninth in the lunar calendar older than that, that is no difficulty; because, when these traditions and these dates were consigned to posterity, the Arabian calendar was still cyclical, and the month of the deluge was liable to travel through each of the seasons of the year in its turn.

In our opinion, the four sacred months, which are now separated one from another in the calendar, originally all came together; and all at the beginning of the calendar: on which principle Rajeb being the second of the number must have been the second month of the calendar also. The commentators on the Koran date the descent of Noah from the ark on the 10th of Moharram, as that does his entrance into it on the 10th of Rajeb; and this is a strong ground of presumption that, according to the traditionary arrangement of the calendar at that remote period of time, Rajeb and Moharram were consecutive months; and as the former was the second so the latter was the third. The institution of the sacred months is probably to be traced to the first cyclico-Julian correction of the primitive Arabian calendar, above alluded to, September 24, B. C. 1302; which first defined and fixed the limits of the months in the natural year, and if it did not give them names gave them distinct Julian dates. But these are questions on which we cannot enter at any further length at present.

### SECTION X.—viii. *On the Etruscan and the Italic tradition.*

A Tuscan tradition has been reported by Suidas[a], on the faith of an unknown author, whom he himself had met with; of which we had occasion to give some account in a former work of our own[b]. This tradition recognised an hexaëmeron of creation; but an hexaëmeron amounting altogether to a period of 6000 years, every day of which was devoted to a distinct process in the general economy of the creation; and every day, so devoted to its proper work, was equal to a period of 1000 years. And as it assigned 6000 years to the process of creation, or of the bringing of things into being; so

[a] Τυρρηνία. [b] Exposition of the Parables, vol. i. p. 346.

it assigned 6000 years to the duration of the creation itself; i. e. to the continuance in being of the things thus produced.

The sources of this tradition have not been pointed out by any editor of Suidas; and probably never will be: and though *prima facie* it exhibits an analogy to the Persian one, of which we have made mention *supra*[c], the resemblance between them goes no further than the particular length of the interval between the beginning of creation and the end of the system of things so brought into being; which is 12000 years in both alike. In other respects the two traditions have nothing in common, and each must be regarded as independent of the other; though we should be altogether willing to admit that before the time of Suidas, (the first half of the tenth century of the Christian æra[d],) the Persian doctrine both of the creation and of the duration of things might be known in Italy. We shall leave our readers therefore to form their own opinion on the authenticity of this Tuscan fragment; regretting only that we are not able to throw any further light upon it: though every one must admit that if genuine it not merely illustrates the ancient tradition of Italy concerning the origin of things, but contains sufficient to shew that it must have been founded at bottom on the Scriptural account of creation; that is, in other words, on the matter of fact itself.

Let us proceed then to other indications of primitive Italic tradition on the same points in general; if any such are to be met with. Now the nundinal correction of the Hetrurians, though only the second of its kind which had yet taken place in Italy, was attached to the epoch of March 25, B. C. 860: and this was also the appointed term of the beginning of the decursus of Hetrurian sæcula. This latter coincidence gives the choice of that epoch a peculiar significancy: for to what point of departure could a decursus of periods like these sæcula be attached with so much propriety, as to the epoch of time itself? that is, to the epoch of Mazzaroth. And March 25, B. C. 860, came within one day of the epoch of Mazzaroth, March 24. There is no difficulty in supposing the knowledge of the sphere of Mazzaroth to have passed from Egypt to Italy before B. C. 860. We shall pro-

[c] Section V.

[d] Cf. in Ἀδάμ. Φαλέκ. Κωνσταντῖνος ὁ μέγας: and Κωνσταντινόπολις.

bably see proofs hereafter of a communication between Egypt and Italy, of an earlier date than that. And as the testimony of antiquity is express to the fact of the settlement of a colony of Lydians also in Italy, before B.C. 860; the knowledge of the sphere of Mazzaroth and of its proper epoch might be communicated to the people of Italy by their means. For our part however we should be entirely of opinion that this particular epoch of the decursus of their own sæcula, March 26, was determined by the Hetrurians for themselves; and yet on the very same principle and for the very same reasons as the epoch of Mazzaroth, March 24, by the Egyptians: viz. because it was known to the ancient Hetrurians of this time, just as much as to the Egyptians of former times, that March 25 was not less competent to represent the true epoch of time in their day, than April 25 had been at first.

It is a remarkable circumstance that, though the Roman correction of Romulus was certainly derived from this Hetrurian one; and though the date of that correction was the year of the Foundation also; yet the actual date of the Foundation was not (as it might have been expected to be under such circumstances) the first day of the calendar for the time being, February 4, the kalends of March, but instead of that a day 79 days later, April 24. But testimony is uniform that this actual date of the Foundation was the stated date of the Palilia; and that the date of the Palilia was purposely selected for the date of the Foundation. It is agreed too that the Palilia were a spring festival; and derived their name from the goddess in whose honour they were celebrated; viz. Pales. Now Pales in this ancient Italic conception and personification of such a principle was the type of nature; and more especially of nature, as annually reviving in the spring, and annually exerting its proper power and influence in the capacity of the universal Parent, of the Author and source of production both in the vegetable and in the animal world, at that season of the year in particular.

This fact then being coupled with that of the actual foundation of the city at the end of a secular period of 110 years, and on the anniversary of the Palilia, yet on this particular day of April 24; we may probably come to the conclusion that Italic tradition in the time of Romulus still pointed not

only to the spring of the year in general as the birthtime of universal nature, but possibly also to April 24 as the true *natale mundi* itself; which would be a very extraordinary coincidence; April 24 being only one day earlier than the actual date of the creation, April 25. To some such tradition of the origin of all things at this season of the year, and probably even in this month, we may very reasonably attribute the Roman name of the month of April, which it is agreed was first given it by Romulus; and which the best informed and most judicious of the Romans themselves considered to be synonymous with Aperilis; that is, "the opening month;" "the teeming month;" the month in which the womb of nature is first as it were relaxed and opened; the month in which its first productions (the earnest and pledge of more to follow) are seen to appear.

The Pompilian correction, as we have seen, was attached to February 17. It might advance several days on that term in the course of one cycle of the calendar, but it could not recede upon it, except *per accidens;* and at the end of every cycle it was again brought back to it: and this fixed term, February 17, in the time of Numa, was almost the middle one between the winter solstice and the vernal equinox. It is possible that this consideration might have its weight with Numa, when fixing upon the epoch of his correction: but besides this, he might also have had some regard to the traditionary date of the deluge. The last month in his calendar was February; and February was appointed by him the lustral or piacular month; the anniversary of ceremonies on a large scale in memory of the dead. The proper limits of his February were January 21 and February 17: and it coincided with the same season of the year in general at this time, as the head of the primitive calendar itself at the time of the deluge. Be this as it may, the true epoch of his calendar and of the kalends of his January, February 17, half way in reality between the winter solstice and the vernal equinox, can scarcely be known without provoking a smile at the many unfounded coincidences, which the curious and inquisitive not only of modern but of ancient times have imagined to be discoverable, between the supposed time of the beginning of his year, the winter solstice, and the nature

and attributes of the double-faced porter of the year, his Janus; whom he really stationed not in the doorway of the winter quarter, but half way between that and the spring, with one eye looking back on the winter solstice, and the other looking forward to the vernal equinox.

### SECTION XI.—ix. *On the Hellenic tradition.*

The fact being known that all the corrections of the primitive Hellenic calendar, beginning with that of Solon, were circumscribed by two Julian terms, January 19 the date of the first, and December 20 that of the last; it might lead us at first sight to conclude that this was the effect of some predilection of the Greeks for the winter solstice, or for that period of the natural year in general: as if Hellenic tradition had connected the beginning of things with the season of winter in particular. Yet though it is certain that the popular cosmogony of the Greeks, from the time of Hesiod at least, did connect the beginning of things with a state of chaos and darkness; it is not less certain that this particular coincidence of the rise of so many forms of the Hellenic octaëteris, between these two Julian terms of December 20 and January 19, was entirely *per accidens*, and due to circumstances.

That the Greeks in general had no deliberate preference for the season of winter, above any other in the natural year, as the epoch of civil time, appears from the facility with which they discarded this epoch at the next and most general correction of their calendar upon the Metonic principle; substituting for it in some instances the summer solstice, in others the autumnal equinox, in others the heliacal rising of the Pleiades, in others the cosmical setting. And yet it is a remarkable circumstance that, amongst all these changes of the beginning of the civil year from the winter solstice, or from that season of the year in general, to some other, there is not a single instance to be met with, so far as we ourselves are aware, of a transition from winter to the vernal equinox; though we could not venture to say that such transitions did not take place; nor that cases of that kind might not have been known to Censorinus, and to others of the ancients.

And still it is true that there was one season of the natu-

ral year, in favour of which the Greeks had a national prejudice, of very long standing. This season was midsummer, or the summer solstice. It was due to this prejudice that Meton proposed his correction, in the first instance, adapted expressly to the summer, and not to the winter, solstice. Plato was actuated by the same predilection, when he recognised this season of the year in particular as the proper epoch of the year of his republic; which he does almost as matter of course.

And yet the origin of this prejudice itself must have been purely accidental. The Panathenaïc calendar of Erichthonius was attached to July 20 or 21; the Olympic calendar of Pelops to June 25: that is, to midsummer in general. These were the oldest, the most solemn and sacred, of the festivals of stated recurrence in the Hellenic calendar. That these had been fixed to this one season of the year was enough to recommend it above all the rest; and to make the reformers of the calendar in after-times anxious to attach their respective corrections to that season in particular. Nor indeed could they have done otherwise, if their corrections were intended for the regulation of these festivals as well as of the rest. And yet that either the Panathenaïc or the Olympic institution of primitive antiquity was connected with midsummer from the first was entirely an accidental coincidence; the effect of nothing but the relation of the primitive cyclical year to the natural at those particular times.

In short it must be admitted that we no where meet with any genuine Hellenic tradition, the reflection of primitive belief, which could be said to have perpetuated among the Greeks the true epoch of the beginning of time or of the *natale mundi*, except in their cosmogony; the outline of which is consistent with the Mosaïc account of the creation, and the beginning of which is evidently laid in the spring. But with respect to the deluge, and to the second beginning of things, the case is different. Every one knows that Grecian tradition handed down the fact of two catastrophes of this kind; one of them the flood of Ogyges, the other the flood of Deucalion. The question is, whether these are to be regarded as two distinct events, or after all as one and the same. The antiquity of the flood of Ogyges, and the dura-

tion assigned it even by this Hellenic tradition[e], identify that with the true deluge of primitive tradition, the flood of Noah: and yet there are circumstances associated with the flood of Deucalion also which must have been borrowed from those of the flood of Scripture. Nor is there any better mode of reconciling these different traditions either with each other or with Scripture, than by concluding that the flood of Deucalion is the flood of Ogyges under another name, and merely transferred to a later epoch; and that neither of them is ultimately distinguishable from the flood of Noah.

Now there was a certain number of days in the Attic calendar, all belonging to one month, and all running on consecutively in that *month*, which went by the name of μιαραὶ (ἡμέραι). These were the ἡμέραι ἀποφράδες of the Attic calendar κατ' ἐξοχήν: days which for some reason or other were not merely ominous or unfortunate, but *detestable;* days which could not be thought of or mentioned without abomination and abhorrence; for that is the proper meaning of μιαραὶ, applied to them. It appears that they made part of the month Anthesterion; and that the reason of the estimation in which they were held, and of the name which was given them to express that character, was *this;* that these were the days of the flood of Deucalion, and consequently of the destruction of all of the Hellenic, if not of the human race, except those two, Deucalion and Pyrrha.

The flood of Deucalion, according to the tradition of the Greeks[f], lasted *nine* days; and these μιαραὶ ἡμέραι were either nine or seven in number also, following close on the Anthesteria in their proper month; which is another remarkable coincidence: for the Greeks would scarcely have permitted days of such a character to take up a festival like the Anthesteria, and in fact to be mixed up with it, if they could have prevented it; if their place in the calendar had not been immutably fixed by circumstances. Now in the calendar of Solon Anthesterion was always the second month; and consequently at the time of his correction it was the second month in the primitive calendar also. Its Julian terms, at that particular juncture of time, within one day were the

[e] Solinus, xi. § 18. [f] Apollodorus, Bibliotheca, i. cap. vii. § 2.

same in each; February 17 or 18, and March 19 or 20. Are we not justified in concluding from these coincidences that Hellenic tradition, down to the time of Solon, had preserved an exact recollection of the deluge in general, and of many of its circumstances in particular; and especially that it had never mistaken the proper month of that event, and scarcely even the day of the month? For the deluge really happened on the 17th of the second primitive month; and these μιαραὶ ἡμέραι in Anthesterion appear to have been dated from the 13th inclusive to the 21st inclusive; between which the 17th is the middle date.

### SECTION XII.—x. *On the traditions of the nations of the north of Europe.*

The first and most general octaëteric correction of the primitive equable calendar among the nations of the north of Europe, as we have already explained[f], was attached to Dec. 25: and December 25 at that time was the true date of the winter solstice. This was no doubt a remarkable coincidence, which we could not resolve into the effect of chance; because the primitive Thoth at this very time was falling on November 25, and the primitive Phaophi only on December 25; so that the second month of the old calendar must have been purposely constituted the first of the new; and if so, on account of this very circumstance, its coinciding with the winter solstice.

If this fact however should be thought to imply a particular preference for the winter solstice as the epoch of civil time; another fact which holds good of the same correction, and for ought which is known to the contrary holds good from the first, would imply the same kind of predilection for the summer solstice; viz. that, though the head of the calendar was attached to the middle of winter, the intercalary system of the calendar was more closely associated with midsummer: for the seat of the intercalary month in this octaëteric type of northern antiquity was always about midsummer.

The truth indeed appears to be that the authors of this correction, whosoever they were, must have considered each of these seasons of the year in the details of their correction

[f] Supra Diss. vii. ch. iii. sect. v. vii. vol. i. 575.

alike; and therefore could have given the preference deliberately to neither above the other, as the original or proper epoch of time in the abstract. The name of *mother-night*, which they gave to the *new-year's* night in their calendar, though necessarily determined thereby to the night of the winter solstice, proves nothing in favour of the estimation of the winter solstice itself as the origin of time. This name must have been given to the first night in the calendar reckoning of time, from whatsoever period of the natural year that reckoning might have been appointed to set out: and it must have been applicable to the new year's night under all circumstances of its relation to the natural year alike. The utmost which we could infer from that denomination, and from its peculiar appropriation to the first night of the calendar, would be *this*; that in the opinion of those who imposed it the antemundane state of things was one of darkness, and that the first night was older than the first day.

The traditions of the north are contained in the Edda; the most ancient collection of which is that of Sæmondre, a native of Iceland; made in A. D. 1057[g]. The meaning of Edda is "grandmother," or "grand aunt;" and the Edda of the north in this collection, like the Sibyll of the Greeks, who never died nor ever grew old, is the mouthpiece of antiquity itself; and speaks in the name of primitive tradition and primitive belief.

Many Scriptural facts occur in this collection, though mixed up with fabulous matter; in reference too both to the first and to the second beginning of things; the formation of Eve from the side of Adam; the universal deluge, and the escape of Bergelmer only, (who is here the representative of the patriarch Noah,) from the general destruction, with his wife, in a ship[h].

Diodorus Siculus mentions an Hyperborean tradition[i], which if truly derived from the north, without being modified in any manner by admixture with the fables of the Greeks while passing through their hands, would imply that the primitive tradition of the north, with respect to the *natale*

[g] Bailly, Astron. Ancienne, Éclaircissemens, Liv. iii. § i. 323. 324.

[h] Rudbeckius, Atlantica, pars i. cap. i. § 2. p. 7: cap. xxii. § 5. 542 sqq.

[i] ii. 47.

*mundi* and the origin of time itself, agreed with that of the rest of the world; and placed it where the universal belief of mankind concurred in placing it: that is, in the spring of the year; between the vernal equinox and what Diodorus in this account defines by the πλειάδων ἀνατολή—which in the Parapegmata, or solar and sidereal calendars, of the Greeks generally was the boundary of the spring and the summer division of the natural year; and in Diodorus' time was commonly fixed to some Julian term between May 6 and May 15.

In the Anglo-Saxon type of the first octaëteric correction of the primitive solar calendar of the north, the name of Easter month (or Eostur-monath) was given to the fourth month; a name which is still retained in our language in the form of Easter: and Easter in the Christian calendar still coincides with the same season of the year as this month in general. This Eostur-monath of our Anglo-Saxon forefathers in their unconverted state was the first of the months of spring. Its proper Julian terms in the primary type of their calendar were March 24 and April 22: which is sufficient to shew that the *natale mundi* and the origin of time itself, according to the true chronology of the world from the first, must have been comprehended in this month. It is agreed that Eostur was the name of a goddess, to whom the month was sacred; and, through that, the season of the year too with which it coincided. No one can mistake the resemblance of Eostur or Easter to the Hebrew Ashtoreth, or the Phœnician Astarte; the former of which in the Septuagint assumes the form of Ἀσταρήτ. Astarte among the Phœnicians was the feminine principle in the cosmogonic Duad of the Phœnicians; and she and her partner Thammuz in the theology of the Phœnicians were the two parents of universal being, the types and representatives of universal nature. The name of the Anglo-Saxon Eostur may or may not be the same with that of the Phœnician Astarte: but there is very little doubt that the idea conveyed by the name, and the abstract conception of the goddess herself, were much the same in each instance. And this Easter goddess being thus the type of production in the Anglo-Saxon cosmogony; the site of the month appropriated

to her is an argument of the season supposed to be peculiarly subject to her influence, not only in the ordinary course of things, but from the first; the *proper* season of the *first* operation of this cosmogonic principle, as well as of its *continued* operation ever since. And as the British calendar appears to have agreed with the Anglo-Saxon in all essential respects; there seems little reason to doubt that, in this view of the relation of the fourth month in both calendars to the origin of things and to the beginning of time, the Druids, who were the authors of the British correction in particular, must have concurred.

The Greek *ἦρ*, the Latin *ver*, and the Anglo-Saxon *year*, upon etymological principles, can scarcely be considered originally different words. No one will call this in question in the case of *ἦρ* and *ver*: and there seems to be just as little reason to doubt of it in the case of *year*. For in what respect would this word year differ from the Greek *ἦρ* if it were without the *y*? And in what respect is the letter *y*, prefixed to the Anglo-Saxon *year*, different from the letter *v*, prefixed to the Latin *ver?* And if grammarians and etymologists tell us it is the presence or the absence of the same sound, and of its proper symbol, which makes all the difference between the Greek *ἦρ* and the Latin *ver;* why should not the same distinction apply to the Greek *ἦρ* and to the Anglo-Saxon *year?* And in what respect is the Latin *v* more competent to represent this sound, which grammarians and etymologists call the Æolic digamma, than the English *y?* This however being assumed, and as it appears to us on perfectly reasonable grounds, viz. that the Greek *ἦρ* and the Latin *ver*, and the Anglo-Saxon *year*, were originally one and the same word; the next question will be what was the proper meaning of this word in each of these languages at first? In the Greek and in the Latin, it has never had any meaning but that of *spring:* in the Anglo-Saxon, and in the cognate languages, so far as we know, it has never had any but that of year. Which of these then is the original, and which is the secondary or derivative, signification of the word? We should not hesitate to answer, *that* of *spring;* as attested by the meaning of the word both in the Greek and in the Latin at all times. On what principle then could the word itself

have been originally the same in the Anglo-Saxon as in the Greek or in the Latin, and yet its meaning always different? On one principle only; viz. That the idea of the year itself, in its first and original conception, was not to be distinguished from that of spring: in other words that *annual* time was known or believed to have been always reckoned from spring. In this point of view, the idea of *spring* and that of *year* would be inseparably associated together: and to reckon by springs would be the same thing as to reckon by years, and *vice versa*. It is well known that, when these nations of the north transferred the beginning of their year to the winter, they transferred this idiom also; and began to speak of winters as equivalent to years. The same idiom is just as conceivable of the use of the word spring under similar circumstances; only that, in the instance which we are considering, the circumstances are not similar; for we do not know that the annual reckoning of calendar time among these nations was ever attached to the spring, and consequently that the transfer of the word from the sense of spring to the sense of year is to be explained simply on that principle. The explanation is probably much deeper and more philosophical; involving the question of the origin of annual time itself, and whether it could be distinguishable even in idea from the spring. It is a remarkable distinction at least, that in the Greek and in the Latin the same word should never have had any but its first and proper meaning of spring; and in the Anglo-Saxon never have had any but its secondary and derivative one of year.

It is mentioned by Plutarch that the principal object of adoration among the Cimbri, in the time of Marius, was a brazen bull[k]; by which they were accustomed to swear on occasions of greater solemnity than usual. If this bull was not ultimately borrowed from the Egyptians, and was not merely their Apis or their Mneuis; we can have little reason to doubt but that it must have been intended as a type or symbol of the Bull in the heavens: and we consider this supposition much the more probable of the two. This fact however would do much to connect the origin of time and the beginning of things in the opinion of these nations with

[k] Marius xxiii.

the sign of the Bull. The Hindus both of ancient and of modern times, and the Persians also, have always associated the sign of the Bull with the origin of time; and there is no reason why the nations of the north might not have done the same, and for the same reasons in general too; viz. because primitive tradition and belief among them also actually connected the beginning of things with this sign or this constellation in particular.

A singular story is related by Plutarch, *De Facie in orbe lunæ*[1]; of a ceremony in the island Ogygia, (which he describes as situated some where five days' sail to the west of Britain—and so far in the direction of Ireland, if Ireland itself is not this island Ogygia so described,) and in some other island still further to the west than Ogygia, in which Kronos or Saturn was supposed to have been imprisoned by Jupiter. The ceremony consisted in the celebration of a stated sacrifice to Saturn, upon this island, once in 30 years; when the planet Saturn, which the Greeks, says Plutarch, call *Φαίνων* and the people of Ogygia *Νυκτοῦρος*, returned to the sign of the Bull. *Νυκτοῦρος* means properly warder or watchman of night: and such a name given to the planet Saturn would imply that he was the keeper of time; yet that time was reckoned from night rather than from day. On this principle it would be easy to explain the association of this planet with the ceremony in honour of Kronos; who was himself the type of time. On the same principle the ceremony might be regulated by the period of Saturn; which was a period of 30 years. But why was this period reckoned from Taurus? Why were the beginning and the end of the period of Saturn supposed to be determined by Taurus? And why was the proper time of the performance of this 30 years' ceremony, in honour of the god of time, considered to be arrived when Saturn, the keeper of the reckoning of time, was now in Taurus? The most probable answer to this question is, Because time itself was supposed to have begun in Taurus.

[1] Cap. xxvi.

## SECTION XIII.—xi. *On the tradition of the nations of Spanish America.*

The traditions of the new world, with respect to the origin of time, are involved in greater obscurity than those of the old: yet so far as anything can be ascertained concerning them it does not appear that they spoke a different language, or deposed to a different effect, from those of the old world. The historical recollections indeed of the nations of Spanish America seem to have stopped short at the deluge. Those of the Mexicans at least go back to the time when Cox-Cox and Xochi-quetzal, the only two individuals of the human species who survived the universal destruction produced by that event, were supposed to have founded the race of mankind anew; but not beyond that epoch*.

* It is a remarkable circumstance however that tradition appears to have preserved among these nations a more distinct and exact recollection of the principal facts in Scripture history from the creation to the dispersion, than we meet with any where in those of the old world.

The descent of mankind from one pair, an age of innocence and happiness, the temptation and fall of the human race, the part taken in this by the woman and the serpent in particular, the deluge, the ark, the preservation of one family only, and of individuals of the different kinds of animals, from the general destruction, the tower of Babel, the confusion of languages, and the dispersion; all these things were clearly attested by the traditions of Spanish America: as the reader may see from the following references to the Researches of the Baron de Humboldt alone; vol. i. 93–97 (plate vii:) 140 (pl. xii:) 195–197 (pl. xiii:) 320 (pl. xxiii:) ii. 15–27 (pl. xxvi:) 83, 84 (pl. xxxvii.) We shall quote one passage merely in terms at present, in illustration of what we have said concerning their tradition of the deluge.

"Of the different nations which inhabit Mexico, paintings representing the deluge of Coxcox are found among the Aztecks, the Miztecks, the Zapotecks, the Ilascaltecks, and the Mechoacanese. The Noah, Xisuthrus, or Menou, of these nations is called Coxcox, Teo-Cipactli, or Tezpi. He saved himself conjointly with his wife Xochiquetzal, in a bark, or, according to other traditions, on a raft, of *ahuahuete* (cupressus disticha.) The painting represents Coxcox in the midst of the water, lying in a bark. The mountain, the summit of which, crowned by a tree, rises above the waters, is the Peak of Colhuacan, the Ararat of the Mexicans. The horn, which is represented on the left, is the phonetic hieroglyphic of Colhuacan. At the foot of the mountain appear the heads of Coxcox and his wife. The latter of these is known by the two tresses in the form of horns, which, as

Their calendar reckoning of time, as we have already explained, had come to be generally determined to the end or beginning of the Julian year, even before the date of the conquest; but that coincidence appears to have been the effect of circumstances: nor can we infer any thing from it with respect to their real opinions concerning the proper reckoning of time itself. To form a correct judgment on this point, we ought to go back to the epoch of the first and original correction of the primitive calendar among them; if we knew exactly where to look for it, and where to find it. The Yucatan correction and the Toltec appear to be the best entitled to dispute the palm of antiquity with each other; and the former seems to have been determined to midsummer in the natural year, the latter much nearer to the point of spring even for the climate of Mexico. We cannot indeed as yet undertake to speak with certainty in reference to the true nature and true date of the Yucatan correction; but we need not hesitate to say that the true date of the Toltec correction, from which both the Mexican calendar, and many others, which the Spaniards found in existence in the same countries when they first set foot there, are ultimately derivable, was March 1 A. D. 700. And this is so near to the beginning of spring even in that quarter of the world, as almost to authorize the inference that this epoch was purposely fixed upon in order that calendar or civil time itself might thereby become attached to the same

we have often observed, denote the female sex. The men born after the deluge were dumb: a dove, from the top of a tree, distributes among them tongues, represented under the form of small commas. We must not confound this dove with the bird which brings Coxcox tidings that the waters were dried up. The people of Mechoachan preserved a tradition, according to which Coxcox, whom they called Tezpi, embarked in a spacious *acalli* with his wife, his children, several animals, and grain, the preservation of which was of importance to mankind. When the great spirit, Tezcatlipocha, ordered the waters to withdraw, Tezpi sent out from his bark a vulture, the *zopilote*, (vultur aurea). This bird, which feeds on dead flesh, did not return, on account of the great number of carcasses with which the earth, recently dried up, was strewed. Tezpi sent out other birds, one of which, the humming bird, alone returned, holding in its beak a branch covered with leaves. Tezpi, seeing that fresh verdure began to clothe the soil, quitted his bark near the mountain of Colhuacan." Vol. ii. p. 64, 65. pl. xxxii.

beginning as natural. For this correction was the first which fixed and defined cyclical time, in the previous reckoning of annual, among these nations, in a manner conformable to the principles of the Julian year: and it would thus be first fixed and confined within limits which it could never afterwards pass, just as, by virtue of the revolution of cyclical time itself, it was returning to the first principles of its relation to natural. Nor would this motive be inconsistent with that which we alluded to before[m], as having probably had something to do with the fact of such a correction, and at this particular time also.

### Section XIV.—xii. *On the Rabbinical tradition.*

The modern Jewish calendar, having been previously reduced to its present form, and completed in all its details, appears to have been published in A. D. 344. But as the authors of this calendar, when searching for the epoch of their lunar reckoning from first to last, thought proper to go back to the *Molad Tohu*, or *Birth of the void;* they found it, as their chronological system obliged them to do, B. C. 3761, which, on the principles of the Rabbinical chronology, was the year of the creation; not however in the new moon of April in that year, but in the new moon of October; October 7 at 6 P. M. according to the primitive rule: in which primary lunar date of their calendar their lunar reckoning, carried back from A. D. 344, agreed with our own brought down from B. C. 4004; as our tables shew in B. C. 3761.

It is clear then that the authors of this calendar must have dated the beginning of things in the autumn, though not on the mean or true autumnal equinox; both which B.C. 3761 were falling Oct. 22, not Oct. 7 *. They dated the creation

| | | | h. | m. | sec. | th. | |
|---|---|---|---|---|---|---|---|
| * Mean vernal equinox for the meridian of Jerusalem, B. C. 3761 | April | 22 | 20 | 48 | 7 | 12 | |
| | | 182 | 14 | 54 | 25 | 12 | |
| | | 205 | 11 | 42 | 32 | 24 | |
| Cast off | | 183 | | | | | |
| Mean autumnal equinox .... | October | 22 | 11 | 42 | 32 | 24 | |
| Equation of the centre .... | | + | 3 | 18 | 5 | 0 | |
| True A. E. .............. | October | 22 | 15 | 0 | 37 | 24 | app. time. |

m Diss. v. ch. iv. sect. ix. v. vol. i. 364.

of man three days before this new moon of the epoch; October 4 at 18 hours from sunset: though Scripture itself is express to the creation of mankind as the last act in the process of creation itself; and in particular to the production of the sun and of the moon on the *fourth* day of the same week of which man was created on the *sixth*.

We are not concerned however with any of their opinions or any of their assumptions but those which affect the question of the beginning of time. And it is easy to account for the fact of their fixing that to the autumn rather than to the spring, without any prejudice to the truth itself. It has been already observed [n] that the head of the primitive year at the time of the Exodus was falling in the autumn. It was set forward at that time to the spring. The Israelites at least just before the Exodus were commanded to begin a new calendar reckoning with the month of the Exodus itself; which was so near the beginning of spring that the eleventh day of that month coincided with the mean vernal equinox at the time.

It does not appear however that the old reckoning of the year, from the opposite quarter of the year, was not allowed to be retained too, and to go on as before, so long as it did not interfere with the new and with the purposes for which that was specially intended. There is reason to conclude that from the time of this change of the calendar the Jews had a double beginning of annual civil time; one attached to the spring, the other to the autumn; one which bore date on the first of the month afterwards called Nisan, another which was similarly reckoned from the first of that which was afterwards called Tisri. And though Nisan is never spoken of in Scripture itself except as the first month, nor Tisri except as the seventh; that is no objection to the fact of this distinction, that the beginning of the year in one sense was reckoned from Tisri, and in another from Nisan, though not in the same sense from both. The feast of trumpets ushered in the beginning of the year; and the stated date of that was the first of Tisri. The cycle of sabbatic years and the cycle of the years of jubile were both reckoned from the be-

[n] Supra p. 68.

ginning of the year; and yet both were notoriously reckoned from Tisri. As then there was actually this second beginning of the year among the Jews from time immemorial; it was natural for the authors of the calendar in A. D. 344 to assume its existence from the first. They drew the same inference from the fact as Scaliger; and taking it for granted that the new moon of Tisri, which had always been the first new moon of their year in the sense thus explained, must be the new moon of creation, they went back to the hexaëmeron to find it.

It was for the same reason and from the same *prima facie* evidence of the state of the case that Josephus also dated the deluge in the second month of this Jewish calendar; the Hebrew name of which was Marchesvan, the Macedonian one which he uses in its stead was Dius [o]: observing at the same time that Tisri, the month before Marchesvan, was the beginning of the civil year of the Jews while they were still in Egypt *, though Nisan was constituted by Moses the beginning of their ecclesiastical year at the Exodus. It follows that he dated the deluge in the autumnal quarter of the year, and very probably the creation too; though that is no necessary consequence of this peculiar opinion respecting the beginning of the civil year. Philo Judæus, a little before the

* Such also was the belief of the author of the Targum, ascribed to Jonathan, and commonly called the Jerusalem Targum.

Thus, Gen. vii. 11: Anno sexcentesimo annorum vitæ Noach, mense secundo, (ipse est mensis Marchesvan; hactenus enim non numerabantur menses nisi a Tisri qui erat initium anni absolutionis mundi...)

Ib. viii. 4: Et quievit arca mense septimo; ille est mensis Nisan.

Ib. viii. 5: Et aquæ ibant et diminuebantur usque ad mensem decimum, mensem Tamuz.

Ib. viii. 13: Accidit autem sexcentesimo primo anno, in Tisri, initio mensis, initio anni, exsiccatæ sunt aquæ...

Ibid.: Et in mense Marchesvan vicesima septima die mensis exsiccata est terra.

And in reference to the change of the reckoning of the months of the calendar, which preceded or accompanied the Exodus, paraphrasing Exodus xvi. 1, this Targum has it: Decima quinta die mensis Ijar—ille erat mensis secundus ex quo exierant e terra Ægypti. Also of the month Ethanim, 2 Kings viii. 2: In mense quem veteres vocabant mensem primum ... et nunc ipse est mensis septimus.

o Ant. i. iii. 3.

time of Josephus, recognises Tisri as the first month in the calendar, and Nisan as the seventh, quite as distinctly as he does; yet no writer of antiquity has borne a plainer testimony to the fact of the creation of the world in the spring, and in this seventh month Nisan itself, than Philo Judæus.

῞Εβδομος ὢν ὁ μὴν οὗτος (he is speaking of Nisan) ἀριθμῷ τε καὶ τάξει κατὰ τὸν ἡλιακὸν κύκλον, δυνάμει πρῶτός ἐστι, διότι καὶ πρῶτος ἐν ταῖς ἱεραῖς βίβλοις ἀναγράφεται. αἴτιον δὲ ὥς γε οἶμαι τόδε. τὴν ἐαρινὴν ἰσημερίαν ἀπεικόνισμά τε καὶ μίμημα συμβέβηκεν εἶναι τῆς ἀρχῆς ἐκείνης καθ' ἣν ὅδε ὁ κόσμος ἐδημιουργεῖτο. καθ' ἕκαστον οὖν ἐνιαυτὸν ὑπομιμνήσκων ὁ θεὸς τῆς τοῦ κόσμου γενέσεως ἀνέφηνε τὸ ἔαρ, ἐν ᾧ πάντα ἀνθεῖ καὶ βλαστάνει. διόπερ οὐκ ἀπὸ σκοποῦ πρῶτος ἀναγέγραπται μὴν ἐν τοῖς νόμοις, ἐπειδὴ τρόπον τινὰ τῆς πρώτης ἀρχῆς ἐκμαγεῖόν ἐστιν, ἀπ' ἐκείνης ὥσπερ ἀπ' ἀρχετύπου σφραγῖδος ἐκτυπωθείς [o]—'Επεὶ οὖν ἐστιν ἡ ἐαρινὴ ἑορτὴ τῆς τοῦ κόσμου γενέσεως ὑπόμνημα, κ`, τ. λ.[p]

SECTION XV.—xiii. *On the ecclesiastical tradition.*

There are few questions of fact, which cannot be said to have been decided either one way or the other by the positive declarations of Scripture, on which the opinions of the fathers of the church are found to be so generally in agreement, as on this of the origin of time in all its measures, noctidiurnal, hebdomadal, lunar, and solar; which they all date in the hexaëmeron of creation, and almost all in the spring, and at the vernal equinox itself; differing merely in the terms of this date; which they assume, according to their preconceived ideas concerning it, sometimes as March 25, sometimes as March 22, and sometimes as March 21[q]. On this particular question the opinions of the heretic did not differ from those of the most orthodox *. And this persua-

* For example, two apocryphal productions are quoted at some length by Syncellus; one of them entitled the Vita Adami, the other the Λεπτὴ Γένεσις.

The extract from the Vita Adami[r] begins on the first day of the second

o Opp. ii. 293. 7. De Septenario et Festis Diebus.

p Ibid. 45. Cf. i. 8. l. 44. De Mundi Opificio: 9—24.

q See our Dissertations, Diss. xiii. vol. i. 460, 461, Art. xii. note: 464, Art. xvii. Cf. Auctor Computi Paschalis, Cypriani dictæ: Constitutiones Apostolicæ, v. 17: Bucherius, De Doctrina Temporum, 7. cap. 8, Victorii Prologus: 469, 470, 471, Epistola Philippi: 477, 7, 8, Ambrosii Epistola: 486, 487, Dionysii Ep. i.

r i. pag. 7. l. 8—p. 7. 20. Cf. 14—9. 17: Bonnæ, 1829.

sion of the origin of things in the spring appears still firmly impressed on the minds of Christian writers, long after the contrary belief of the creation in the autumn had established a footing in the church; as for example, in Lydus [t] in the sixth century; in the Chronicon Paschale [u] in the fourth and seventh; in Joannes Damascenus [w] in the eighth; and in Syncellus [x] in the ninth.

We know of no opinion to the contrary of equal antiquity and of equal authority, but that of Clemens Alexandrinus; from whose chronology and the explanations which accompany it, if his numbers can be depended on, it must certainly be inferred that he dated the creation of Adam (and therefore that of the world) on a particular day in the month of October. The same explanation however may very probably be given of the grounds of the opinion in his case, as in that of Josephus, and in that of the Jewish rabbis, and of Scaliger; viz. that knowing the Jewish calendar to be bearing date in his time in the autumn, and always to have done so in the sense explained above, he concluded that the world itself had been originally formed in the autumn. Besides which there was an ancient calendar in Egypt itself, which was calculated to mislead him in the same manner; viz. the Alexandrine correction of the primitive cyclical year, the

week of creation, Nisan 8 in the style of Syncellus, Pharmuthi 6 in the Alexandrine calendar, April 1 in the Julian; and extends down to the 93rd day, the second day of the 14th week, Epiphi 1, June 25, the date of the summer solstice. The introduction of Adam into Paradise is dated on the 46th day of creation, the fourth of the seventh week, Pachon 14, May 9, the Πλειάδων ἐπιτολή, &c.

The Λεπτὴ Γένεσις dated the fall in the seventh year of creation [s], and the expulsion from Paradise in the eighth, 45 days after the fall, at the Πλειάδων ἐπιτολὴ too, May 10; on which principle the fall itself must be dated April 5; a very curious coincidence, if it turns out (as we hope it will hereafter) that this was the actual date of that event. Adam is said to have passed in Paradise a week of 365 days, that is, a week of years of that magnitude; seven years of 365 days each, before his final expulsion from it. The author of this work therefore, whosoever he was, was well acquainted with the equable year; and probably recognised no form of the civil year but that.

[s] i. p. 13. l. 17—14. 3. Cf. 14, 15—15. 10.

[t] De Mensibus, iv. 46. p. 81. l. 12.

[u] i. p. 1. l. 1: 18. 4–21: 26. 1–27. 3, Bonnæ, 1832.

[w] De orthodoxa Fide, lib. ii. cap. 22.

[x] i. 1. l. 1—10. l. 15:—13. l. 15.

epoch of which was August 29 or 30. Even the Egyptian monk Annianus, author of a system of chronology brought down from the first in periods of 532 years, a contemporary of Theophilus, the 22nd patriarch of Alexandria, and consequently of Theodosius the Great, and of Honorius and Arcadius his sons [y], had not yet ventured to introduce this new epoch of creation into the church; though it is not so clear that his contemporary Panodorus, author of a similar chronology, did not entertain an opinion of that kind [z]; which in the course of time too acquired something like the stamp and sanction of an authoritative declaration of the Greek church, by finally attaching the epoch of the creation to September 1 B. C. 5508 [a]. But no such opinion as this could yet have been generally received in Egypt in the time of Anatolius of Laodicea [b], A. D. 277, though he was educated at Alexandria; nor in that of Theophilus, patriarch of Alexandria [c], A. D. 385; nor in that of Cyril his successor [d]; each of whom still speaks of the vernal equinox as of the first absolute commencement of time; and the latter in particular does not scruple to call it the *natale mundi* itself.

### Section XVI.—xiv. *On the poetical tradition.*

If the opinions of individuals on particular points are entitled to deference, because of their good sense; because of their superior knowledge and information; because they have thought and inquired more than others; because they represent the standard of correct opinion itself on such points; how much greater weight and authority must be due to the common sense of mankind, on whatsoever side it is pronounced! And on this particular question of the *natale mundi*, whatsoever conclusion chronologers and learned men may have come to in some instances to the contrary, it is notorious that the feeling and conviction of the whole human race taken collectively, from an instinct and sympathy of their nature much more than from any deliberate judgment

[y] Syncellus, i. 32. l. 15: 62. 3. See i. 62. 17—65. 20.

[z] Cf. Syncellus, 617, 18—619. 9.

[a] Eckhel, Doctrina Numm. Vett. viii. cap. i. § ix. 333: De Consulibus Cæsaribus: in the reign of Leo VI. (Sapiens), A. D. 886-911.

[b] See our Dissertations, App. xxvii. vol. v. 623, 624.

[c] Prologus, § 2, apud Bucherium, 472.

[d] Prologus, § 1. Ibid. 481.

of their reason, has declared for the vernal equinox; has every where anticipated or confirmed the decision of the Pervigilium Veneris, that spring was the morning of nature, spring was the youth of the world, spring was the birthday of time; in one word, that

Vere natus orbis est.

The annual revival of nature at this season is the liveliest type of the origin of nature itself. It is a standing memento of the beginning of time in connection with the existing system of things; and if the fathers could discover in it a natural argument of the resurrection, it is much easier for chronologers to find in it a natural argument of the creation.

Dic, age, frigoribus quare novus incipit annus,
  Qui potius per ver incipiendus erat?
Omnia tunc florent: tunc est nova temporis ætas:
  Et nova de gravido palmite gemma tumet:
Et modo formatis amicitur vitibus arbos:
  Prodit et in summum graminis herba solum:
Et tepidum volucres concentibus aëra mulcent:
  Ludit et in pratis luxuriatque pecus:
Tum blandi soles; ignotaque prodit hirundo,
  Et luteum celsa sub trabe fingit opus:
Tunc patitur cultus ager et renovatur aratro:—
  Hæc anni novitas jure vocanda fuit.

Fasti, i. 149.

Is this reasoning rendered less just and conclusive, if we read in the last line,

Hæc MUNDI novitas jure vocanda fuit?

What was the golden age of mythology but a state of perpetual spring?

Ver erat æternum, placidique tepentibus auris
Mulcebant Zephyri natos sine semine flores.

Metamorphos. i. 167[e].

Or what was that conception or recollection of a paradisiacal state of things, of which this golden age was only the reflection, and the islands of the blessed only the realization, but the mildness, the coolness, the freshness of perennial spring?

[e] Cf. Hesiod, Opera et Dies, 108—125. Fragmenta, lxvii. Virgil, Eclogæ, iv. 4—10: 15—33: 37—45. viii. 52—54. Tibullus, i. iii. 35—48: 59—62. Ovid. Metam. i. 89—112.

Τῇ γὰρ ῥηΐστη βιοτὴ πέλει ἀνθρώποισιν·
οὐ νιφετὸς, οὔτ' ἂρ χειμὼν πολὺς, οὔτε ποτ' ὄμβρος,
ἀλλ' αἰεὶ Ζεφύροιο λιγυπνείοντος ἀήτας
ὠκεανὸς ἀνίησιν, ἀναψύχειν ἀνθρώπους.

Odyss. Δ. 565—568[f].

The descriptions and praises of spring which occur so frequently in the poets are only the expression of this common feeling; in giving a voice and a language to which the poets are the oracles of our common nature, the *mystagogi* and *hierophantæ*, through whom she discloses the secrets of her own being, silencing all doubts by their

ἑκὰς ἑκὰς ἐστὲ βεβηλοί.

And though what the poets inculcated on this point could be proved to be only fiction and fable; still it would be fiction so like to truth, fable so pleasingly disguised, error and delusion rendered so grateful by its outward dress, and recommended so strongly by its *prima facie* probability, that every one would be ready to exclaim, Malo cum poetis errare quam cum aliis recte sapere.

i. Æneadum genetrix, hominum divômque voluptas,
Alma Venus! cœli subter labentia signa
Quæ mare navigerum, quæ terras frugiferenteis
Concelebras: per te quoniam genus omne animantum
Concipitur, visitque exortum lumina solis:
Te dea te fugiunt ventei te nubila cœli
Adventumque tuum; tibi suaveis dædala tellus
Submittit flores, tibi rident æquora ponti,
Placatumque nitet diffuso lumine cœlum.
Nam simul ac species patefacta est verna diei,
Et reserata viget genitabilis aura Favonî,
Aëriæ primum volucres te Diva tuumque
Significant initum, perculsæ corda tua vi.
Inde feræ pecudes persultant pabula læta,
Et rapidos tranant amneis: ita capta lepore
Inlecebrisque tuis omnis natura animantum
Te sequitur cupide, quo quamque inducere pergis.

Lucretius, i. 1.

[f] Cf. Hesiod, Opera et Dies, 166—171. Aratus, Phænomena, 100—114. Horace, Epod. xvi. 41—66. Plutarch, Sertorius, viii. ix. Pindar, apud Plutarchum, Consolatio ad Apollonium, xxvi. Lucretius, iii. 18.
Adparet divûm numen sedesque quietæ,
Quas neque concutiunt ventei, nec nubila nimbis
Adspargunt neque nix acri concreta pruina
Cana cadens violat: semper sine nubibus æther
Integer et large diffuso lumine ridit.

It VER et Venus, et Veneris prænuncius ante
Pennatus graditur Zephyrus: vestigia propter
Flora quibus mater præspargens ante viaï
Cuncta coloribus egregiis et odoribus obplet.—Ibid. v. 736.

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ii. Mox ubi nubigenæ Phryxi nec portitor Helles*
Signorum et pecorum princeps caput efferet undis;
Alma sinum tellus jam pandet, adultaque poscens
Semina depositis cupiet se nubere plantis.
Invigilate viri! tacito tunc tempora gressu
Diffugiunt, nulloque sono convertitur annus.
Flagitat ecce suos genitrix mitissima fœtus.
Columella, x. De Hortorum cultu, 155.

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Ingenera: nunc sunt genitalia tempora mundi.
Nunc amor ad coïtus properat, nunc spiritus orbis
Bacchatur veneri, stimulisque cupidinis actus
Ipse suas adamat partes, et fœtibus implet.
Nunc pater æquoreus nunc et regnator aquarum
Ille suam Tethyn hic pellicit Amphitriten:
Et jam cæruleos partus enixa marito
Ubera nunc reserat, pontumque natantibus implet.
Maximus ipse Deum posito jam fulmine fallax
Acrisionëos veteres imitatur amores;
Inque sinus matris violento depluit imbre.
Nec genitrix nati nunc aspernatur amorem,
Sed patitur nexus flammata cupidine tellus.
Hinc maria hinc montes hinc totus denique mundus
Ver agit: hinc hominum pecudum volucrumque cupido
Atque amor ignescit menti, sævitque medullis,
Dum satiata venus fœcundos compleat artus,
Et generet varias soboles, semperque frequentet
Prole nova mundum, vacuo ne torpeat ævo.—Ibid. 196.

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iii. Tunc primum miti pelagus consternitur unda,
Et varios audet flores emittere tellus.
Tunc pecudum volucrumque genus per pabula læta
In venerem partumque ruit, totumque canora
Voce nemus loquitur, frondemque virescit in omnem:
Viribus in tantum segnis natura movetur.—Manilius, iii. 652.

* The meaning of this is that Phryxus rode safely on this ram, but not Helle.

iv. Ver adeo frondi nemorum, ver utile sylvis:
Vere tument terræ et genitalia semina poscunt.
Tum pater omnipotens fecundis imbribus æther
Conjugis in gremium lætæ descendit, et omnes
Magnus alit, magno conmixtus corpore, fœtus.
Avia tum resonant avibus virgulta canoris,
Et venerem certis repetunt armenta diebus.
Parturit almus ager, Zephyrique tepentibus auris
Laxant arva sinus: superat tener omnibus humor:
Inque novos soles audent se germina tuto
Credere: nec metuit surgentes pampinus austros,
Aut actum cœlo magnis aquilonibus imbrem,
Sed trudit gemmas et frondes explicat omnes.

Georgica, ii. 323[g].

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From this annual repetition of a scene, which could not have been exhibited even for the first time under different circumstances, the judicious Virgil, whose imagination was never permitted to dazzle or cloud his reason, does not hesitate to draw the natural inference; and as much in the spirit of the truest and soundest chronology, as of the most genuine poetical feeling, to pronounce spring the birthtime of the world.

Non alios prima crescentis origine mundi
Inluxisse dies aliumve habuisse tenorem
Crediderim: ver illud erat, ver magnus agebat
Orbis, et hibernis parcebant flatibus Euri,
Cum primum lucem pecudes hausere, virûmque
Ferrea progenies duris caput extulit arvis,
Inmissæque feræ sylvis et sidera cœlo.
Nec res hunc teneræ possent perferre laborem,
Si non tanta quies iret frigusque caloremque
Inter, et exciperet cœli indulgentia terras.

Georgica, ii. 336[h].

[g] Cf. Oppian, Cynegetica, i. 114, sq. 375—391. Halieutica, i. 473—476. Bion, Idyll. vi. 15—18.

[h] Cf. Panegyrici Vett. v. cap. ii. § 2. iii. § 1. Eumenii Panegyricus, Constantio Cæsari dictus.

# CHAPTER V.

*On the argument of the circumstances under which time must have begun, from an absolute epoch of time itself; and from the analogy of the Divine dispensations, as determined to the same season of the natural year.*

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## SECTION I.—*An absolute epoch of time that of one of the equinoxes.*

WE have often had occasion to observe that with respect to mankind and to the present system of things, the duration of which has always been measured by time, such as it is at present and always has been in connection with this system; the Mosaic creation must be the absolute epoch of time, whether it is so to time in the abstract, and even as it exists at present, or not. And if it is only admitted that the Mosaic creation must thus serve as the absolute epoch of time, especially of noctidiurnal and of annual time, relatively to the present system of things; the inference from that fact appears to us inevitable, that time in general and noctidiurnal and annual time in particular must have begun at one of the equinoxes.

For with respect to the absolute epoch of such a measure of time as the noctidiurnal cycle; we are bound to consider that this cycle is not a simple but a compound quantity, made up of two parts, the sensible distinction between which is light and darkness; and that this was the constitution of that measure of time from the first, and is in fact a necessary consequence of the physical cause of the measure itself. It is impossible therefore to regard it except as one *whole* made up of two *parts*, each of which is as essential to the integrity of the compound as the other; or to give it any name, as so composed of two such different parts, but that of the night-day or of the day-night perpetually.

If so, the relation of these parts to each other must be something fixed. It is not possible for the proportion of either to the other to vary except within certain limits; much less for either to be merged in the other. It follows

too that in the first instance of all the proportion of two such parts one to the other must have been that of equality. In the first noctidiurnal cycle which ever existed the night must have been equal to the day and the day to the night. Consequently if the beginning of this cycle itself from the first was implicated with that of the annual; both must have begun together at one of the equinoxes.

There is only one perfect form of the day, and only one perfect form of the night; and that is the form in which each of them is equal to half the revolution of the earth which is made up of both exactly: and this can hold good only at the equinoxes. The same conclusion follows from the proportion of mean and invariable measures of any kind to actual but fluctuating and variable ones of the same kind. It is agreed that the proper standards of nature in such cases are the mean. There must however be a time when even actual standards do not differ from mean; when standards of excess at one time and of defect at another in comparison of the mean are either not yet distinguishable from the mean, or no longer so. And what time can that be but the epoch of origination of such actual measures themselves? If the noctidiurnal cycle itself has had such an epoch, and that epoch relatively to the existing succession of things has been the Mosaic creation; the mean and the actual standard of this cycle at the Mosaic creation could not have differed: and therefore the Mosaic creation must have coincided with one of the equinoxes.

Lastly, this truth appears to be implied in the declaration of Scripture, That God, having created the light on the first day, divided the light from the dark; and called the duration of the light, the *day*, and that of the *dark*, the night. Division in a case like this must have been equivalent to partition, or to the separation of a certain whole into its component parts; and this whole being the noctidiurnal cycle, which has only two parts, partition in a case like this must have been tantamount to equipartition, or to the equal division of the whole between its two component parts. It does not seem possible to conceive the distinction of the first noctidiurnal cycle into its two component parts, except in their proper proportions relatively both to the whole and to each other.

We have already explained[i] that on the first day of the hexaëmeron, in the absence of the sun and in the absence of the atmosphere also, but with the same distinction of light and darkness as at any other time, this was possible, without the liability of the proportion to be in any the least degree impaired by the natural phenomenon of refraction and twilight; which in whatsoever proportion it might have made any addition to the sensible duration of light, or of the day, in the same must have diminished that of the dark, or of the night. And possibly that this exact proportion of the length of the first day to that of the first night might hold good without prejudice to any other of the laws of nature, might be one reason of the economy, peculiar to this first day even above the two next days. To have light not derived from the sun was not confined to this first day: to have light without an atmosphere to refract that light was so.

### SECTION II.—*This absolute epoch of time, in the sense of noctidiurnal and annual both at once, the vernal equinox.*

The argument which has just been stated may be said to determine the absolute beginning of time in conjunction with the present system of things to one of the equinoxes; but not necessarily to the vernal equinox. But this argument as yet has been confined to the noctidiurnal cycle, and to the circumstances under which that must be supposed to have begun in the first instance of all. Let us proceed to consider the same kind of reasoning in its application to the annual cycle.

Here then it is very necessary to remind the reader[k] that the question of the first commencement of annual time is not that of the absolute beginning of any complex of days and nights which may be ordinarily called a year; but of that complex of days and nights which measures and defines the revolution of the earth round the sun, from a given point in its orbit to the same again; a revolution made up indeed of days and nights in terms of the noctidiurnal cycle, but a natural unit or integer in itself as much as the noctidiurnal cycle.

Now this natural revolution of the earth round the sun,

[i] Supra, p. 8. [k] See supra, Diss. ii. ch. iii. sect. i. vol. i. 71.

so measured and defined, which constitutes that natural unit of time which is called the year, is the course and succession of the seasons: and natural annual time as the same with the course and succession of the seasons neither begins at present nor ever could have begun at first except at the vernal equinox. We speak of *four* cardinal points in the natural year; the vernal equinox, the summer solstice, the autumnal equinox, and the winter solstice. What are these, but the terminators or boundaries of the different seasons? And what do they define and determine but certain stages, more sensible and more important than others, in the process of maturing and perfecting the natural productions of the year? As to the order of the seasons; no one can even imagine it has not always been one and the same, always the same succession, of which spring has been the beginning and winter the end perpetually: an order and succession very justly implied in the name given to the natural year, (which is not to be distinguished from this order and succession itself,) whether the *tropical* year, or the *annus vertens*, or, as Homer terms it, the περιτροπέων ἐνιαυτός. To begin this succession from any point in the solar orbit but the vernal equinox would involve the practical absurdity of making summer in the natural year prior to spring, or autumn to summer, or winter to autumn. It would be much the same thing as to make noon in the natural day prior to morning, evening to noon, or midnight to evening: or, in the different stages of human life, to make youth precede childhood, or manhood youth, or old age manhood.

It is surprising therefore, and, but for the force of prejudice, which is capable of shutting men's eyes against the perception of the simplest and plainest truths, it would be unaccountable, that, with respect to the origin of natural annual time, there should ever have been a difference of opinion among chronologers. The mean length of the natural year itself is a totally different question. The elements on which that length depends, the invariability of the axis major of the solar orbit, and the mean motion of the sun, are always the same. It makes no difference therefore to the mean length of the entire revolution from what part of the solar orbit it is supposed to be measured; provided that part is

always the same. But from what point the revolution is to be supposed to have begun at first, and to what point it should be referred ever after, as the absolute epoch of the revolution itself; that as we have observed is a different question.

### SECTION III.—*On the argument from the analogy of the Divine proceedings in general.*

The most influential and most convincing consideration however after all, which could be submitted to a serious and reflecting mind, in order to assist and direct its judgment on this question, is *this:* That the season of spring and even the date of the mean vernal equinox itself are determined by the matter of fact to have been that season of the natural year, which the Divine Providence has invariably selected for its most remarkable dispensations; especially for those which mediately or immediately were most nearly connected with the scheme of redemption, and *mutatis mutandis* exhibited the closest analogy to the original scheme of creation. In such dispensations as these, is there any one so hardy and so presumptuous, and yet so destitute of common sense as well as of piety and of an habitual conviction of the wisdom and greatness and goodness of God, as to maintain that any thing was left to chance? or that the relation of times and seasons like these, and that of the events by which they were characterised, one to the other, was not the effect of appointment, and of the most critical regard to the fitness of one for the other? of the most exact accommodation of one to the other? ordained by the Author and Controller of time itself, and in these instances the sole and exclusive agent in carrying his own dispensations into effect; in fixing both the time *at* which, and the manner *in* which, and the place *where*, they should come to pass.

Thus the destruction of the world by the deluge in one year, and its renovation and reviviscence in the next; the birth of Isaac at one time, and the birth of Moses at another; (both eminent types of Jesus Christ, especially the former;) the institution of the passover; the change of the beginning of the year preliminary to the Exodus; the Exodus itself; the passage of the Red sea; the erection of the taber-

nacle in the wilderness; the passage of the Jordan, and the Eisodus into the land of promise; the epoch of the ritual or religious, that is, the lunar calendar; the foundation of the temple by Solomon; and, lastly, the birth of our Lord himself in one year, and his passion and resurrection in another: all these events, either by virtue of direct positive testimony, or upon circumstantial grounds of proof amounting to the highest degree of probability, are capable of being determined to the season of spring, and some of them even to the mean vernal equinox. It is only consistent with the analogy of so many later examples of the same kind, that the beginning of this whole economy, (of which every succeeding dispensation in its proper order of time was but the gradual development,) the first link in this wonderful chain of time and in the still more wonderful chain of events with which it has been connected, (which every one must admit to have been the creation of our own world and the production of mankind,) should have been attached to the same season in general, and even to the mean vernal equinox in particular.

## CHAPTER VI.

*On the argument of the beginning of time from the position of the axis major of the solar orbit,* B. C. 4004.

### SECTION I.—*Astronomical testimonies, La Place, Pontécoulant, Biot.*

THERE is yet a distinct argument both of the year of the Mosaic creation and of the season of the year at which it took place; and an argument of great importance: but as it depends upon an astronomical matter of fact, discoverable and capable of being verified at present only by calculation, we prefer to state it in the words of the astronomers, not in our own. And the first testimony of this kind which we shall produce is that of La Place.

i. "Une époque astronomique remarquable est celle où le grand axe de l'orbe terrestre coïncidoit avec la ligne des équinoxes; car alors l'équinoxe vrai et l'équinoxe moyen

étoient réunis. Je trouve par les formules précédentes que ce phénomène a eu lieu vers l'an 4004 avant l'ère Chrétienne, époque où la plupart de nos chronologistes placent la création du monde, et qui sous ce point de vue peut être considérée comme une époque astronomique. En effet, on a pour ce temps, $t = -5754$; et l'expression de $\psi'$ donne

$$\psi' = -87°, 8530.$$

C'est la longitude de l'équinoxe fixe de 1750 (where the observations of La Caille began) par rapport à l'équinoxe d'alors. L'expression précédente de $\pi''$ donne pour la longitude du périgée de l'orbe terrestre, ou de l'apogée solaire, comptée de l'équinoxe fixe de 1750,

$$\pi'' = 89°,1700.$$

Cette longitude par rapport à l'équinoxe de l'année 4004 avant l'ère Chrétienne étoit donc 1°,3170; d'où il suit, que l'instant où la longitude de l'apogée solaire, comptée de l'équinoxe mobile, étoit nulle, précède d'environ soixante neuf ans l'époque où l'on fixe la création du monde. Cette difference paroîtra bien petite, si l'on considère l'inexactitude des expressions précédentes de $\psi'$ et de $\pi''$, lorsqu'on les rapporte à un temps aussi éloigné, et l'incertitude qui subsiste encore soit relativement au mouvement des équinoxes, soit à l'égard des valeurs que nous supposons aux masses des planètes[l]."

"Ces variations de l'orbe terrestre ont fait coïncider le périgée du soleil avec l'équinoxe du printemps à une époque à la quelle on peut remonter par l'analyse, et qui se trouve antérieure à notre ère de 4089 ans. Il est remarquable que cette époque astronomique soit à peu près celle où la plupart des chronologistes placent la création du monde[m]."

The first of these passages is thus translated by Mr. Bowditch[n]:

"A remarkable astronomical epoch is that when the greater axis of the earth's orbit was situated in the line of the equinoxes; because the apparent and mean equinoxes then coincided. We find by the preceding formulas that this phenomenon took place about 4004 years before the Christian

[l] Mécanique Céleste, liv. vi. ch. x. 31. tom. iii. p. 113, A. D. 1802.

[m] Système du Monde, liv. iv. ch. ii. p. 205, A. D. 1813.

[n] Book vi. ch. x. § 31, (vol. iii. p. 266.)

æra; and at this epoch most of our chronologists place the creation of the world; so that in this point of view we may consider it as an astronomical epoch. For we have at that time $t = -5754$; and the preceding expression of $\psi'$ gives $\psi' = -79$ d. 04 m. 04 sec., which is the longitude of the fixed equinox of 1750 referred to the equinox of that time $t$. The preceding expression of $\pi''$ gives for the longitude of the perigee of the earth's orbit, or of the sun's apogee, referred to the fixed equinox of 1750, $\pi'' = 80$ d. 15 m. 11 sec. This longitude, referred to the equinox of the year 4004 before the Christian æra, is 1 d. 11 m. 07 sec.: hence it follows, that the time, when the longitude of the sun's apogee, counted from the moveable equinox, was nothing, precedes about 69 years the epoch usually assumed for the creation of the world. This difference will appear very small, if we take into consideration the imperfections of the preceding expressions of $\psi'$ and $\pi''$, when applied to so distant a period, and the uncertainty which still exists relatively to the motion of the equinoxes, and to the assumed values of the masses of the planets."

ii. La Place, dans *La Mécanique Céleste*, a calculé l'expression de $\psi'$ pour deux époques remarquables; celle où le grand axe de l'orbe solaire coïncidait avec la ligne des équinoxes, et celle où le grand axe de l'orbe solaire était perpendiculaire à cette ligne. À la première époque l'équinoxe vrai et l'équinoxe moyen coïncidaient: dans la seconde le solstice vrai coïncidait avec le solstice moyen. Voyons ce que donnent à cet égard les formules précédentes. Si l'on fait $t = -5907$, pour l'expression de $\psi'$ on a $\psi' = -81°. 20'. 42''$. Cette quantité prise avec un signe contraire sera la longitude de l'équinoxe de 1800, par rapport à l'équinoxe correspondant au temps $t$. L'expression précédente de $\omega''$ donne pour la longitude du périhélie de l'orbe terrestre, comptée de l'équinoxe fixe de 1800, $\omega'' = 81°. 20'. 31''$. La somme de ces valeurs prises avec leur signe sera la longitude du même périhélie comptée de l'équinoxe de l'année 4107 avant l'ère Chrétienne, époque qui correspond à la valeur que nous avons supposée au temps $t$. Cette longitude était donc alors de $11''$. La plupart des chronologistes placent la création du monde vers l'an 4004 avant l'ère Chrétienne: l'époque où le grand axe

de l'orbe solaire coincidait avec l'intersection de l'écliptique et de l'équateur a donc précédé d'après nos formules d'un siècle environ la création du monde [o]."

iii. " Suivant les observations de La Caille, la longitude du périgée en 1750 était 309 gr. 5827.........quand le grand axe coïncidait avec la ligne des équinoxes, la longitude du périgée était de 200 gr. Depuis cette époque jusqu'en 1750, il s'est avancé de 109 gr. 5827. Le nombre d'années nécessaires pour ce déplacement est

$$\frac{10958270000}{1910668}; \text{ ou}$$

environ 5735, ce qui reporte ce phénomène à 4000 ans environ avant l'ère Chrétienne. Par une rencontre assez singulière, c'est à peu près vers ce temps, selon la plupart des chronologistes, que remontent les premières traces du séjour de l'homme sur la terre, quoiqu'il paraisse d'ailleurs, par un grand nombre de preuves physiques, que la terre elle-même est beaucoup plus ancienne [p]."

### SECTION II.—*Remarks on the preceding statements.*

On the question of the date of this astronomical fact it thus appears astronomers are divided. La Place has determined it to B. C. 4073 or 4089; Pontécoulant to B. C. 4107, or B. C. 4000; Biot to B. C. 4000. Others might be mentioned who have determined it to still different dates; as Francœur to B. C. 4008; Boyer [q] to B. C. 3980. We may presume then that the exact date of the coincidence cannot be determined even in the present state of the science of astronomy; that its formularies are still wanting in the perfection required for that purpose; and that there is good reason for the doubts expressed by La Place, whether calculations carried so far back with the present formulæ could be trusted.

The next case of the same kind of coincidence which comes within the limits of the duration of our proper system of things, (viz. that when the axis major coincided with the line of the solstices,) is modern and recent in comparison of

o Poutécoulant, Théorie Analytique du Système du Monde, liv. vi. ch. xv. tome iii. p. 425, 426. edit. 1834. See however his Précis d'Astronomie, § 37. i. p. 126, where he dates it B. C. 4000.

p Biot, Astronomie Physique, tome iv. 465, 466. § 319.

q Traité du Calendrier, vi. 45–47, note, p. 45.

this first of all, when it coincided with the line of the equinoxes: and it might have been expected *a priori* that astronomers would certainly be agreed about that. Yet La Place determined that to A. D. 1249 or 1250[s]; others have done so to A. D. 1245, 1234 and 1248[t].

The extremity of the axis major of the solar orbit, which is at the greatest distance from the focus of the ellipse in which the sun is constantly stationed, is called by astronomers the apogee (ἀπόγαιον), and the opposite extremity is called the perigee (περίγαιον). The line which connects them (the axis major itself) is called the line of the apsides. The line which joins the two equinoxes is the line of the equinoxes; and that which connects the two solstices is the line of the solstices. The line of the apsides has a retrograde motion along the solar orbit; which as referred to the vernal equinox is always eastward: and, if this motion is supposed to have been going on in the same way as long as the earth itself has been revolving round the sun, it must have brought the line of the apsides into all kinds of positions relatively to any other points of the solar orbit. When this line coincides with that of the equinoxes, the true and the mean equinoxes coincide also; and when it coincides with the line of the solstices, the true and the mean solstices do so. In the former case too the winter quarter of the year must be equal to the spring, and the summer quarter to the autumnal; and in the latter, the spring quarter must be equal to the summer, and the autumnal quarter to the winter[u]: but it does not appear that the line of the apsides can ever occupy such a position relatively to either of these other two lines, that the whole of the natural year can be equally divided among the four quarters.

But with regard to the date of such coincidences as these; a phenomenon, which cannot be determined with certainty by calculation carried back from the present day not more than 800 years, can scarcely be determined by calculations

[s] Mécanique Céleste, lib. cit. p. 114. Cf. Bowditch, iii. 267. Biot, loc. cit. p. 466. Astronomical Tables and Formulæ of the late Mr. Baily, p. 17. Pontécoulant, Précis d'Astronomie, § 37. i. p. 126.

[t] Pontécoulant, Précis, i. 127. Somerville, Connexion of the Physical Sciences, ch. xxxv. § 445. p. 106, A. D. 1835. Mechanism of the Heavens, B. ii. ch. xiv. p. 395, (1831).

[u] See the Introduction to our Tables, part iii.

which must go back 5800 years at least. It is evident that results so obtained, yet ranging from B. C. 3980 to B. C. 4107, must be regarded only as approximations to the truth. In a case like this, the most judicious as well as the most scientific astronomers would be the first to admit that their conclusions might vary from one to two degrees in excess or in defect of the truth; and that the coincidence which they discover, some a few years earlier others a few years later than B. C. 4004, might very possibly have held good in B. C. 4004 itself. Astronomy therefore, even by its own confession, not being yet competent for the infallible solution of a problem like this; let us go to chronology, and see whether chronology may not perhaps supply the means of deciding the question by an argument peculiar to itself.

SECTION III.—*On the chronological argument of the coincidence in question* B. C. 4004, *from the proportion of mean time to true at the absolute epoch of time itself.*

As time is the proper subject matter of chronology, the relations, distinctions, and phenomena of time are first of all subject to the cognizance of chronology, and must first and properly be judged of by chronology. Among these is the difference of mean time and apparent or actual; and which is most properly to be called and considered *true* time. The name of true time is generally given to *apparent*, though only in the sense of *actual*; but a moment's reflection will satisfy us that it ought much more properly to be restricted to *mean* time, and the name of actual only to be given to apparent. For true time must be that which has never differed from itself; nor ever varied from the standard by which it first began to be measured. And if so, true time and mean must always have been the same thing: for mean time only, not apparent or actual, can have answered to that description perpetually.

Actual time in the sense of apparent, referred to any such fixed standard, is always varying. There are only four times in the natural year at which it agrees with mean. At all others it is either greater or less than mean. And to reduce one to the other at all times, except those four, requires a peculiar process and peculiar rules, for what is called the

equation of apparent time to mean. It has been shewn however that actual standards but variable, and mean standards and invariable, of the same natural ideas or natural quantities cannot differ indefinitely, and cannot differ perpetually. The difference between them has its limits at all times: and there must have been, or there must be, a time at which it either did not yet exist, or will no longer exist: and the former is the time of the first origination of both such standards; the latter is the time of the return of the actual to the first principles of their relation to the mean.

On this principle, at the absolute beginning of time there could have been no difference between mean time and apparent or actual. And if the Mosaic creation is that absolute beginning of time of both kinds, as they are going on at present in conjunction and always have been; then at the date of the Mosaic creation there could have been no difference between mean time, and apparent or actual. But if there was no such difference at that moment, then there was no such thing at that moment as the equation of time: from which it follows that, if the date of the Mosaic creation was the mean vernal equinox B. C. 4004, the line of the apsides must have coincided with the line of the equinoxes, and the solar apogee with the mean vernal equinox itself.

The books of astronomy shew that the equation of time is due to two causes; one the obliquity of the ecliptic, the other the inequality of the proper motion of the sun [x]. These two causes give occasion to two distinct equations: both of which must become =0 at once, if mean time is to be the same with apparent, or *vice versa*. The former disappears four times in the year; that is, at the two equinoxes, and at the two solstices: the latter, when the mean solar anomaly, as it is called, is either =0 or to six signs; that is, the sun is either in apogee or in perigee [y]. Both consequently can disappear at once only when the apogee coincides with one equinox and the perigee with the other; or the former coincides with one solstice and the latter with the other.

[x] Biot, Astronomie Physique, iv. ch. xiv. § 358–368 p. 525–540. Ferguson, Astronomy, ch. xiii. § 224–245. p.166–184. Tables and Formulæ of F. Baily, esq. p. 24.

[y] Ferguson, § 239. 240–242. p. 178–182. Biot, § 367, p. 539.

Of these two conditions to the simultaneous disappearance of both the equations of time, at the epoch of the Mosaic creation one would obviously hold good, if the epoch of the Mosaic creation itself was the mean vernal equinox. The other would be a necessary inference from the fact of the absolute equality of mean to actual or apparent time, and *vice versa*, at the absolute origin of both; if that was the epoch of the Mosaic creation also. But in this case the apogee must have coincided with the mean vernal equinox. On the strength of this argument, (which, though peculiar to chronology and not derived from astronomy, is yet founded in truth, because it is founded in the necessary relations of time of both kinds, both mean, and apparent in the sense of actual, to each other, especially at the epoch of the common origination of both,) it appears to us that we should be justified in concluding that the coincidence, which astronomy by its own calculations renders probable, though it does not actually determine, really held good B. C. 4004.

## CHAPTER VII.

*Statements of antiquity relating to the different forms or lengths of the civil year in different instances.*

### SECTION I.—*Production of passages.*

STATEMENTS are found on record, concerning the mode of dividing and reckoning the year in ancient times, which, being understood to be meant of actual modifications of the civil calendar at such times, would militate against our own conclusions; and in particular against the fundamental position which we are endeavouring to establish, that the oldest and most genuine form of the calendar was every where the same, and every where such as we have hitherto described it to be. We should not be dealing ingenuously with our readers did we keep back these statements from them; and if we are to produce and to consider them, this is the time for doing so, before we resume our proper subject.

It will be seen that, in the shape in which they have actually come down to us, these statements themselves for the most part are only repetitions of the same things by one author after another; and for the most part too are confined in their application to the Greeks or to the Egyptians: so that, whatsoever they might appear to imply at first sight concerning an uncertain and precarious rule of calendar time at one period in the history of the world or another, it would be true or false in its immediate bearing upon and reference to these two calendars in general, the Hellenic and the Egyptian, only. It can make little difference therefore in what order we produce them; and though Censorinus is comparatively a late authority for them, yet as they are given as circumstantially by him as by any other, we will begin with quoting him for them first.

i. Et in Ægypto quidem antiquissimum ferunt annum bimestrem fuisse: post deinde ab Isone rege quadrimestrem factum. novissime Arminon ad tredecim (lege, *duodecim*) menses et dies quinque perduxisse. item in Achaia Arcades trimestrem annum primo habuisse dicuntur, et ob id *προσέληνοι* adpellati; non, ut quidam putant, quod ante sint nati quam lunæ astrum cœlo esset, sed quod prius habuerint annum, quam is in Græcia ad lunæ cursum constitueretur. sunt qui tradant hunc annum trimestrem Horum instituisse; eoque ver æstatem autumnum hyemem *ὥρας*, et annum *ὧρον* dici, et Græcos annales *ὥρους*, eorumque scriptores *ὡρογράφους*. itaque quatuor annorum circuitum in modum *πενταετηρίδος* annum magnum dicebant. Cares autem et Acarnanes semestres habuerunt annos, et inter se dissimiles, quibus alternis dies augescerent vel senescerent: eosque conjunctos veluti *τριετηρίδα* annum magnum[z].

ii. *Κατ' ἐκείνους γὰρ τοὺς χρόνους τὸν ἐνιαυτὸν ἀπαρτίζεσθαι τέτταρσι μησὶ, τοῖς γινομένοις κατὰ τὰς ἑκάστων τῶν χρόνων ὥρας, οἷον ἔαρος θέρους χειμῶνος· ἀφ' ἧς αἰτίας καὶ παρ' ἐνίοις τῶν Ἑλλήνων τοὺς ἐνιαυτοὺς ὥρους καλεῖσθαι, καὶ τὰς κατ' ἔτος ἀναγραφὰς ὡρογραφίας προσαγορεύεσθαι*[a].—iii. *Πρὸ γὰρ δὴ τοῦ Παλαμήδους ὧραι μὲν οὔπω ἦσαν οὖσαι· μηνῶν δὲ οὔπω κύκλος, ἐνιαυτὸς δὲ οὔπω ὄνομα ἦν τῷ χρόνῳ*[b].

[z] De Die Natali, xix. [a] Diodorus Sic. i. 26. [b] Philostratus, Heroïca, 682 B.

iv. Quod divinis litteris proditum, et per omnem scientiam publicatum, cum Varro non ignoraret, argumentari nixus est cur putarentur antiqui mille annos victitasse. ait enim apud Ægyptios pro annis menses haberi, ut non solis per xii signa circuitus faciat annum, sed luna, quæ orbem illum signiferum xxx dierum spatio illustrat[c].—v. Hodiernum enim mensem unum illi (Ægyptii) annum vocabant[d].—vi. Quæ omnia inscitia temporum acciderunt. annum enim alii æstate unum determinabant et alterum hyeme: alii quadripartitis temporibus, sicut Arcades, quorum anni trimestres fuere: quidam lunæ senio, ut Ægyptii. itaque apud eos aliqui et singula millia annorum vixisse produntur[e].

vii. *Πολλοὶ δέ εἰσιν οἳ καὶ προστεθῆναι τούτους ὑπὸ Νουμᾶ τοὺς μῆνας λέγουσι, τόν τε Ἰανουάριον καὶ τὸν Φεβρουάριον· ἐξ ἀρχῆς δὲ χρῆσθαι δέκα μησὶν εἰς τὸν ἐνιαυτὸν, ὡς ἔνιοι τῶν βαρβάρων τρισὶ, καὶ τῶν Ἑλλήνων Ἀρκάδες μὲν τέσσαρσιν, ἓξ δ' Ἀκαρνᾶνες. Αἰγυπτίοις δὲ μηνιαῖος ἦν ὁ ἐνιαυτὸς, εἶτα τετράμηνος, ὥς φασι. διὸ καὶ νεώτατοι τὴν χώραν οἰκοῦντες ἀρχαιότατοι δοκοῦσιν εἶναι, καὶ πλῆθος ἀμήχανον ἐτῶν ἐπὶ ταῖς γενεαλογίαις διαφέρουσιν, ἅτε δὴ τοὺς μῆνας εἰς ἐτῶν ἀριθμὸν τιθέμενοι*[f].

viii. Nam ante Augustum Cæsarem incerto modo annum computabant: qui apud Ægyptios quatuor mensibus terminabatur, apud Arcadas tribus: apud Acarnanas sex: in Italia apud Lavinios tredecim: quorum annus trecentis et septuaginta et quatuor diebus ferebatur[g].—ix. Perhibentur enim Ægyptii quondam tam breves annos habuisse ut quaternis mensibus finirentur[h]—Ut autem aliter annum tunc fuisse computatum non sit incredibile adjiciunt quod apud plerosque scriptores historiæ reperitur Ægyptios habuisse annum quatuor mensium, Acarnanas sex mensium, Lavinios tredecim mensium[i].

x. Anni certus modus apud solos semper Ægyptios fuit. aliarum gentium dispari numero pari errore nutabat. et ut contentus sim referendo paucarum morem regionum, Arcades

c Lactantius, ii. 12. Cf. Diodor. Sic. i. 26.

d Manetho, apud Euseb. Chron. Arm. Lat. i. 200. (Aucheri, Venetiis, 1818.)

e Pliny, H. N. vii. 49. Cf. Augustin, De Civitate Dei, xv. 12. p. 52.

f Plutarch, Numa, xviii. Cf. Gaza, De Mensibus, viii. Uranologium, 291 B. Zonaras, vii. 5. 322 D.

g Solinus, i. 34.

h Augustin, De Civitate, xii. 10. Cf. Beda, ii. 139. Temporum Ratio, xxxv.

i Augustin, De Civitate, xv. 12. 52.

annum suum tribus mensibus explicabant: Acarnanes sex: Græci reliqui trecentis quinquaginta quatuor diebus annum proprium computabant[k] *.

## SECTION II.—*Remarks on the preceding statements; and probable explanation of them.*

We would not venture to say that there never was a foundation for any of the preceding statements; though they are not all consistent. For instance; how could it be true that the Egyptian year was one month long at one time, three at another, and four at another, and yet true, as Macrobius asserts, that anni certus modus apud solos semper Ægyptios fuit?

The first remark however which may be made upon them

* On this principle it is that the reign of the Egyptian Hephæstus, (Phthas,) or Vulcan, the son of Nilus[l], and that of the next to him, Helius or Sol, his son[m], are represented as so many thousand days, or years in the sense of days; the former ͵αχπ (1680) yet equivalent only to 4 years, 7 months, 8 days; the latter to ͵δυοζ (4477) = 12 years, 3 months, 5 (others 4) days[n]. The resolution of these numbers proves that the years, in these two statements, were taken at the mean Julian standard of 365 days, 6 hours, and the months at 30 days, each.

The method adopted by many modern chronologers for giving a colour of probability to the fabulous periods of antiquity, by supposing months to have been reckoned as years; it thus appears was resorted to by the ancients also. Syncellus would imply that the idea of this expedient first suggested itself to the two Egyptian chronologers, Annianus and Panodorus[o], in explaining the statements of Berosus and Manetho at least. But the above quotations shew that it was nothing new even in the time of Varro. In fact we may infer from Proclus, in Timæum[p], that Eudoxus was the first to propose it among the Greeks: Εἰ δὲ καὶ ὅ φησιν Εὔδοξος ἀληθὲς ὅτι Αἰγύπτιοι τὸν μῆνα ἐνιαυτὸν ἐκάλουν οὐκ ἂν ἡ τῶν πολλῶν τούτων ἐνιαυτῶν ἀπαρίθμησις ἔχοι τι θαυμαστόν. And yet in reality the idea of reckoning a day equal to a much longer interval of time appears in a sentiment ascribed by Plutarch to Empedocles[q].

k Macrobius, Saturnalia, i. xii. 255.

l Diogenes Laertius, Procem. § i. 1.

m Cf. Diodorus, i. 13. 26.

n Scholia in Iliad, Σ. 429 note. Suidas, Ἥλιος and Ἥφαιστος. Malelas, lib. i. 21. line 8: lib. ii. *ad princip.* (Bonnæ, 1831.) Chronicon Paschale, i. 81. 14: 82. 12. Cf. Palæphati Fragmenta, apud Gale, Opuscula Mythologica, 64—66.

o i. pag. 30. l. 11: 32. 15: 57. 10—59. 4: 61. 3—64. 1: 74. 7—75. 10: 148. 6-10.

p A (I), 72 = 31. F.

q De Placitis Philos. lib. v. cap. ιη′.

is that, were it merely a question of names, or of what complex of days and nights must be called a *year;* they might all be dismissed without much ceremony. Men might give the name of a year to a day if they pleased; and no one would need to do more than wonder at the singularity of their rule of reckoning; or of their mode of speaking about such things. But he could not be misled by it himself, so as seriously to confound a day with a year; or even to believe that they, who spoke of a day as of a year in this sense, really meant it of a year.

In the next place, there are some of these peculiar modes of reckoning years which we have no difficulty in accounting for; for instance, the year of four months, attributed to the Egyptians, and the year of thirteen months, attributed to the people of Lavinium in Italy—as we hope to explain in due time.

Thirdly, it is clear of all these statements, that they relate first and properly to divisions of the *natural* year, not of the *civil*. The month is either the solar or the lunar. The lunar month is the lunar year; the solar is an integral part of the solar year. The period of three months or that of four months is only a different mode of dividing the natural year, according to the seasons. The period of six months is half the natural year; either from one equinox to the other or from one solstice to the other. Such distinctions of the year of nature are perfectly compatible with a regular civil calendar of any kind; much more with such an one as the primitive cyclical. The people of Khamskatcha make two such years out of the natural year; one from the vernal to the autumnal equinox, the other from the autumnal equinox to the vernal; the peculiarity of their climate having compelled them to do so. And, according to Tacitus, even the nations of the north whom he comprehends under the general name of Germani had only two divisions of the natural year; one into the summer, the other into the winter. In this statement too he is borne out to a certain extent by the matter of fact; and yet these nations had regular civil calendars of their own, as much as the Greeks or the Romans, and at the very times of which he was giving an account.

Lastly, these seemingly arbitrary and uncertain divisions of

time, under the name of years, instead of being any proof that a simple and uniform civil year, in the shape of the primitive, was not every where in existence, are in reality a strong ground of presumption to the contrary effect. This primitive civil year being cyclical was not capable of coinciding for more than a given length of time with any of the seasons of the natural year; and yet it must coincide with them all, each in its turn: and so long as it was coinciding with any of them, its relation to the natural year was something which the necessity of the case would oblige men to attend to, and would require them to define and render intelligible in some manner or other perpetually. The method which they appear to have adopted for the purpose was the only one which common sense, under such circumstances, could have suggested. It was simply this: To give the name of the seasons to such and such portions of the cyclical or moveable year as happened to be coinciding with them, at the time; whether three months, or four months in particular instances; and as long as they coincided with them.

It is a circumstance of distinction with reference to all these statements, which ought by all means to be remarked, that the divisions of time spoken of in the above representations are not called *ἐνιαυτοὶ* but *ὧροι*. Now *ὧρος* is directly derived from *ὥρα*: and the primary sense of *ὥρα* in Greek appears to have been what we mean by *a season*, a division of the natural year of that kind; and not what we mean by an *hour*. According to some of these statements the first author of such divisions was the Egyptian *Ὧρος* himself: whose Egyptian name indeed appears to have been more like Her, or Har; but whom the Greeks considered to answer to their Apollo, and whom they regarded like their Apollo as the god of seasons *.

* *Ὡρογράφοι· ἱστοριογράφοι, τὰ κατ᾽ ἔτος πραττόμενα γράφοντες· ὧροι γὰρ οἱ ἐνιαυτοί*[r].—*Ὧροι, οἱ ἐνιαυτοί*[r].—*Ὧρος, ἐνιαυτός*[r].—*Ὧρος ὁ ἐνιαυτός . . . . καὶ ὡρογραφίαι αἱ κατ᾽ ἐνιαυτὸν ἀναγραφαὶ γινόμεναι τῶν ἐν ταῖς πόλεσιν*[s].—*Ἔξωρος· παλαιός· . . . . ὧρος γὰρ ὁ ἐνιαῦτος. λέγονται ὧροι καὶ αἱ γραφαί*[t].

Duris, the brother of Lynceus of Samos, contemporary with Alexander

[r] Hesychius, ii. 1596. [s] Etymologicum Magnum, *ὧρος*. [t] Ibid. *Ἔξωρος*.

It is on this principle that we should explain these peculiar divisions of time in the sense of years. They are to be understood of such parts of the cyclical year as were coinciding at particular times with certain fixed parts of the natural year; and *vice versa*. And if the name of years was thus to be given to such parts of the natural year, it is clear that the natural year as made up of them all, if called a year also, must be so in a more eminent and comprehensive sense. It must be a kind of *annus magnus* in comparison of these *anni minorum gentium*: i. e. as Censorinus illustrates the distinction, a sort of πενταετηρὶς, in comparison of *four* such minor years formed out of its own parts; or a sort of τριετηρὶς, in comparison of *two*.

## SECTION III.—*Statements relating to the astronomical observations of antiquity.*

If any one however is disposed to attach more importance to the preceding statements than they appear to us to deserve; and seriously to infer from them that all this confusion in the reckoning of civil time did once actually exist, and among even such a people as the Egyptians; then he is bound in all reason and fairness to confront with these representations another class of statements, which rest upon equally good authority, and yet are totally inconsistent with them. No one requires to be told that regular astronomical observations imply a regular calendar; and observations of that kind of indefinite antiquity a regular calendar of equal antiquity also. Now such observations are attributed to the Egyptians; as well as to other ancient nations: which for

the Great, was the author of an historical work, entitled Ὧροι. Δωρὶς ὡς κόρα· Δοῦρις ἐν τῷ ιβ´ τῶν Ὥρων γράφει οὕτως, κ᾽, τ. λ.[u] If this work had come down to posterity, probably it would have been found that the reason of the name thus given it was the fact that, having to do with the accounts of things which could not be fixed to the same season of the natural year, because of the peculiar nature of the calendar in which they were recorded; Duris adopted the principle of distinguishing events by the seasons in which they happened; and had one ὧρος for spring, another for summer, and so on: just as Thucydides before him had divided the chronology of the Peloponnesian war into summers and winters.

[u] Scholia ad Hecubam, 915: cf. ad Alcestin, 255.

the sake of comparison with the other class of statements relating to the constitution of the civil year at different times, whether in Egypt or elsewhere, we will proceed to subjoin.

i. *Τούτου δ' αἴτιος ὁ πρῶτος ταῦτα κατιδὼν βάρβαρος ὤν· παλαιὸς γὰρ δὴ τόπος ἔθρεψε τοὺς πρώτους ταῦτα ἐννοήσαντας, διὰ τὸ κάλλος τῆς θερινῆς ὥρας ἣν Αἴγυπτός τε καὶ Συρία ἱκανῶς κέκτηται, φανεροὺς μὲν ὡς ἔπος εἰπεῖν ἀστέρας ἀεὶ ξύμπαντας καθορῶντας, ἅτε νεφῶν καὶ ὑδάτων ἀπόπροσθεν ἀεὶ τοῦ κόσμου κατῳκισμένους. ὅθεν καὶ πανταχόσε καὶ δεῦρ' ἐξήκει βεβασανισμένα χρόνῳ μυριετεῖ τε καὶ ἀπείρῳ*[x].—ii. Ægypto certe, ut Plato in Timæo fatetur, nunquam nimietas humoris nocuit vel caloris. unde et infinita annorum millia in solis Ægyptiorum monumentis librisque releguntur[y].—iii. Tum etiam quod per immensa spatia sæculorum ne profana loquacitate vulgarer Ægyptiorum clausa adytis occulebar. quippe quadringenta ferme annorum millia illic reverenti observatione delitui[z].

iv. Principio Assyrii, ut ab ultimis auctoritatem repetam, propter planitiem magnitudinemque regionum quas incolebant, cum cœlum ex omni parte patens atque apertum intuerentur, trajectiones motusque stellarum observaverunt, quibus notatis quid cuique significaretur memoriæ prodiderunt[a].—v. *Οὐ μὴν ἀλλὰ καὶ αἱ διὰ παντὸς τοῦ αἰῶνος σωζόμεναι τῶν οὐρανίων τηρήσεις παρά τε Χαλδαίοις καὶ παρ' ἡμῖν συμμαρτυροῦσι πρὸς τὴν ἀλήθειαν τῆς ἐπιστήμης ταύτης*[b].—vi. *Ἀσσύριοι δὲ, φησὶν Ἰάμβλιχος, οὐχ ἑπτὰ καὶ εἴκοσι μυριάδας ἐτῶν μόνας ἐτήρησαν, ὥς φησιν Ἵππαρχος, ἀλλὰ καὶ ὅλας ἀποκαταστάσεις καὶ περιόδους τῶν ἑπτὰ κοσμοκρατόρων μνήμῃ παρέδοσαν*[c].—vii. *Περὶ δὲ τοῦ πλήθους τῶν ἐτῶν ἐν οἷς φασι τὴν θεωρίαν τῶν κατὰ τὸν κόσμον πεποιῆσθαι τὸ σύστημα τῶν Χαλδαίων· οὐκ ἄν τις ῥᾳδίως πιστεύσειεν. ἐτῶν γὰρ ἑπτὰ καὶ τετταράκοντα* (aliter *τριάκοντα*) *μυριάδας καὶ τρεῖς ἐπὶ ταύτας χιλιάδας εἰς τὴν Ἀλεξάνδρου διάβασιν γεγονέναι καταριθμοῦσιν, ἀφ' ὅτου τὸ παλαιὸν ἤρξαντο τῶν ἄστρων τὰς παρατηρήσεις ποιεῖσθαι*[d].—*Μεγάλη γάρ τις ἐμπειρία*

[x] Plato, Opp. pars iii. vol. iii. 364. =986, 87. 16: Epinomis: cf. Eusebius Præp. Evang. x. 4. § 21. p. 471.

[y] Macrobius, i. 159: Somnium Scipionis, ii. xi.

[z] Marcianus Capella, viii. 274: De Astronomia. (Grotii, 1590.)

[a] Cicero, De Divinatione, i. 1, 2: cf. 41, 93; also Diodorus, i. 50. 81.

[b] Iamblichus, De Mysteriis, sect. ix. cap. iv. p. 168. l. 16. (*Gale, Oxon.* 1678.)

[c] Proclus, in Timæum, A (i). 71 = 31. C.

[d] Diodorus Sic. ii. 31.

*περὶ τούτους εἶναι δοκεῖ, καὶ παρὰ τούτοις ἡ τήρησις τῶν ἄστρων ἀκριβεστάτη. ἀποφαίνονται γὰρ πολλὰς μυριάδας ἐτῶν ὑπάρχειν, ἐξ οὗ παρ᾽ αὐτοῖς ἐστὶν ἡ περὶ ταῦτα σπουδή*[e].

viii. The records at Babylon, according to Berosus[f], extended 15 myriads of years (150,000) back, besides the sum of 120 sari, or 432,000 years, occupied by the reigns of their kings before the deluge. Those of the Egyptians, according to Africanus[g], went 19,000 years back; the Phœnician 30,000, the Chaldean 480,000.—ix. Nam quod aiunt quadringenta et septuaginta millia annorum in periclitandis experiundisque pueris, quicunque essent nati, Babylonios posuisse, fallunt: si enim esset factitatum non esset desitum: neminem autem habemus auctorem qui id aut fieri dicat aut factum sciat. videsne me non ea dicere quæ Carneades, sed ea quæ princeps Stoicorum Panætius dixerit[h]?—Contemnamus autem Babylonios et hos qui e Caucaso cœli signa servantes numeris et motibus stellarum cursus persequuntur; contemnamus inquam hos aut stultitiæ aut vanitatis aut impudentiæ: qui cccclxx millia annorum ut ipsi dicunt monumentis comprehensa continent[i].

x. *Ἤκουσα ἐγὼ τοὺς μὲν Αἰγυπτίους ἀστρῴας τηρήσεις οὐκ ἐλάττονας ἑξήκοντα τριῶν μυριάδων ἐτῶν ἀναγράπτους ἐσχηκέναι, Βαβυλωνίους δὲ ἑκατὸν καὶ τεσσαράκοντα καὶ τεσσάρων μυριάδων*[k].—xi. *Δῆλον δὲ τοῦτο περὶ ἐνίων καὶ τῇ ὄψει γέγονεν· τὴν γὰρ σελήνην ἑωράκαμεν διχότομον μὲν οὖσαν ὑπελθοῦσαν δὲ τὸν ἀστέρα τὸν Ἄρεος, καὶ ἀποκρυφθέντα μὲν κατὰ τὸ μέλαν αὐτῆς ἐξελθόντα δὲ κατὰ τὸ φανὸν καὶ λαμπρόν. ὁμοίως δὲ καὶ περὶ τοὺς ἄλλους ἀστέρας λέγουσιν οἱ πάλαι τετηρηκότες ἐκ πλειόνων ἐτῶν Αἰγύπτιοι καὶ Βαβυλώνιοι, παρ᾽ ὧν πολλὰς πίστεις ἔχομεν περὶ ἑκάστου τῶν ἄστρων*[l].—xii. *Ἀλλὰ τοῦτον μὲν* (the occultation of Mars)

[e] Diodorus Sic. xix. 55.

[f] Apud Syncellum, i. 25. 2–17: cf. 50. 1–9: 30. 6: ii. 58. 4–59. 4: 147. 9–148. 9.

[g] Reliquiæ Sacræ, ii. lib. v. § x. 131. 9: cf. Syncellus, i. 31. l. 4–18. Africanus borrowed this statement relating to the Egyptians from the Epinomis of Plato, loc. cit. supra; which also has 19,000 years.

We are speaking at present of the supposed astronomical records of these nations: but according to Asclepiades*, the *πράγματα Ὠγύγια* of the Egyptians went back more than 30,000 years: according to Apollonius Ægyptius†, their chronology extended back 153,075 years.

[h] Cicero, De Divinatione, ii. 97: cf. 87.

[i] i. 36; cf. Lactantius, vii. 14.

[k] Scholia in Aristotelem, 475. 18. 6. (De Cœlo, i. 270. l. 14.) Simplicius, fol. 27.

[l] Aristotle, De Cœlo, ii. 12. Opp. i. 292. 3.

* Cf. Suidas, in Ἡραΐσκος.

† Theophilus ad Autolycum, ii. cap. xvii. 17: cf. cap. xxv. xxxi.

*αὐτὸς ἐθεάσατο. καὶ περὶ τοὺς ἄλλους δὲ ἀστέρας τὸ αὐτὸ συμβὰν τοὺς* (leg. *τῶν*) *ἀνωτέρω ἐτήρησαν Αἰγύπτιοί τε καὶ Βαβυλώνιοι, ὡς πολλὰς αὐτῶν περὶ ἑκάστου τῶν ἀστέρων τηρήσεις παραδεδόσθαι* [m].

xiii. Cleomedes, treating of the question whether an eclipse of the moon had ever happened while the sun was still to be seen in the opposite horizon, denies the fact; and appeals to the records of eclipses from time immemorial in confirmation of the denial [n]: *Ἀλλὰ πρῶτον μὲν ἀπαντητέον λέγοντας ὅτι πέπλασται ὁ λόγος...πολλῶν γὰρ ἐκλείψεων σεληνιακῶν γεγενημένων, καὶ τελείων καὶ ἀπὸ μέρους, καὶ ἀναγεγραμμένων πασῶν, οὐδεὶς τοιαύτην ἔκλειψιν μέχρι τοῦ καθ' ἡμᾶς βίου ἱστορεῖται ἀναγεγραφὼς οὐ Χαλδαῖος οὐκ Αἰγύπτιος.*—xiv. *Αἰγύπτιοι μὲν γὰρ Νείλου γενέσθαι* (*φασὶ*) *παῖδα Ἥφαιστον· ὃν ἄρξαι φιλοσοφίας, ἧς τοὺς προεστῶτας ἱερέας εἶναι καὶ προφήτας. ἀπὸ δὲ τούτου εἰς Ἀλέξανδρον τὸν Μακεδόνα ἐτῶν εἶναι μυριάδας τέσσαρας, καὶ ὀκτακισχίλια ὀκτακόσια ἑξήκοντα τρία ἔτη· ἐν οἷς ἡλίου μὲν ἐκλείψεις γενέσθαι τριακοσίας ἑβδομήκοντα τρεῖς, σελήνης δὲ ὀκτακοσίας τριάκοντα δύο* [o].

These statements might be increased by still more to the same effect. We shall make no remark upon them at present. We have produced them here merely in order that such as think it necessary may compare them with those which we exhibited above; and may reconcile both together, if they can. At the same time we are not disposed to call these last indiscriminately into question: and of some among them a very important use may be made, in illustrating and confirming the general chronology of antiquity; as we hope to shew hereafter.

m Scholia in Arist. (De Cœlo, i. 292. a, b) 497. 19. a. Simplicius, fol. 117.

n Περὶ Μετεώρων, ii. vi. 147. 12.

o Diogenes Laertius, Procemium, § i–ii. 2.

# DISSERTATION X.

*On the illustration of the chronology of the Old Testament by means of the primitive calendar.*

## CHAPTER I.

Section I.—*The Æra Cyclica necessarily that of Scripture, down to the Exodus at least.*

We could not undertake to say from a certain assurance of the fact, that no change in the primitive calendar had been made any where before the date of the Exodus from Egypt; but we might venture a strong and decided opinion that up to the time of that event it was every where still the same: and we might still more confidently affirm that, whether any change in it had taken place any where before the Exodus or not, nothing is known about it at present; nor, unless evidence should come to light altogether different from that which has yet appeared, is any thing likely to be known concerning it.

We are well aware indeed that more than one nation of antiquity has pretended to be possessed of a calendar, different from the primitive, yet much older than the Scriptural date of the Exodus: but we are equally well aware that all such pretensions are false. They have no foundation except in the fact of actual corrections of the primitive calendar itself; comparatively of recent date, but carried back on the principle of the *reditus retro*, and attached to any epoch, however remote, which best suited the views of the authors of these fabrications. So much of foundation for their professions we do concede to them; but nothing more than that. The calendars which lay claim to any greater antiquity deserve to be treated only as cheats and impositions: and not the less so because some of the learned have been too easily persuaded, from their own account of themselves,

to receive these forgeries as genuine: for even the learned, (especially those who have been sceptically inclined,) notwithstanding their boasted sagacity, have been much too short-sighted in such cases as these; and, carried away by their irrational prejudices against revelation, have been as ready to believe what they ought to have doubted, as to doubt what they ought to have believed.

A change in the primitive calendar was made at the date of the Exodus; but only for the sake of the reckoning of civil time among one people, the children of Israel; and not so much a change, as a rectification, of the primitive calendar itself: for neither the end nor the effect of that change, as we may possibly see hereafter, was any thing else but a restitution of the primitive calendar to its original relations to the mean natural or to the mean Julian year. If any calendar, different from that of the Israelites, was likely to have sympathised with such a change, we might suppose it would have been the Egyptian: and yet it is certain that the civil calendar of Egypt, which was *de facto* the same with the primitive down to the Exodus, continued *de facto* the same with it down to the date of the Alexandrine correction, B. C. 26, at least. And still it is true, that the Egyptians were in possession of the Julian calendar long before the date of the Exodus: only not in the capacity of the civil calendar of their country both public and private, but simply as known in theory to the priests, and as applied in practice if at all to purposes of a peculiar kind, which may perhaps be better understood hereafter.

The civil calendar then, from the creation of man to the flood, and from the flood to the Exodus from Egypt, having been every where the same and every where the primitive equable one; it follows that, if there is any history in existence at present, which begins at the creation and comes down to the Exodus, the calendar by which that history reckons must be the primitive; the æra peculiar to that history and to its chronology must be the cyclical. When we allude to an history of this kind, we shall at once be understood to mean the Bible; the oldest of histories; the most venerable for its antiquity of all; in comparison of which all others, at present in existence, even the most ancient, are

but of "to-day or of yesterday:" an history which is virtually as old as the subject of which it treats. For though it may be true that the pen, which first committed this history to writing in the shape in which it has come down to us, was that of Moses; the history itself was not first written on the pages of the Pentateuch, but on the tablets of heaven, (the *πλάκες οὐράνιαι*,) on which every thing has been registered which has happened from all eternity; and nothing was ever registered nor ever will be registered but the truth.

The present however is neither the time nor the place to enter on the question of the inspiration of Scripture; or on that of the right of the books of Moses in particular to the character of inspired. We neither doubt of that right ourselves, nor would willingly believe that any of our readers do so: or that we shall not cheerfully and cordially have their concurrence in taking this right for granted. And yet we know what those feelings must be which the very mention of this question is calculated to excite; feelings of indignation, feelings of sorrow, and feelings of shame, for the dishonour which is done to the name of Christian, and for the discredit which is cast on learning, philosophy, and science, by the unworthy treatment which this sacred book in general, and no part of it more than the books of Moses, has heretofore experienced, and still does experience, at the hands of those who call themselves Christians notwithstanding; and who lay claim to the character of the most gifted, the most intellectual, and the most refined of their species; though in reality they are after all only the pseudo-critics, the pseudo-philosophers, and the falsely so called men of science of our own day.

We say then that the chronology of the Bible must be mistaken, if, from the beginning of things to the time of the Exodus at least, it is referred to any standard of annual time but the equable. It must be mistaken if it is referred to the mean natural year: it must be mistaken if it is referred to the mean Julian: for the equable differs from both. And though the difference between it and either of them at first might be slight, and almost inappreciable; it was of a nature to become greater with the lapse of time itself: and it must necessarily amount to something considerable at last. But

whether little or great in itself, if there was any difference at all, it must be alike incompatible with the truth. There is no room in a case like this either for excess or for defect. The actual chronology of Scripture is neither more nor less than itself; and what it is in itself depends on its own standard of reference and its own standard of measure; and on nothing else.

The order of our subject requires that we should now pass to the verification of those conclusions which we have been endeavouring to establish, by the actual testimony of calendars derived from the primitive; and the first of this number to claim our attention is the sacred or Israelitic; the next to that is the Egyptian. We should not do justice to the truth, nor probably satisfy the expectations of our readers, did we not endeavour to shew, in howsoever summary and general a manner, the consistency of our conclusions in general with the testimony of Scripture in particular; and by means of the light which the primitive calendar is calculated to throw on the chronology of the Bible itself. We propose therefore to devote the present dissertation to the comparison of the primitive equable reckoning of annual time, both in the sum total and in the details, with the actual chronology of Scripture from the creation to the Exodus at least. If we do not carry this comparison lower down than the Exodus, the principal reason will be because the reckoning of annual time itself in the style of Scripture at the date of the Exodus underwent a change: and the æra to which its chronology is to be referred from that time forward is more properly the æra mundana than the æra cyclica. It does not follow that the chronology of Scripture ceases to be connected with the æra cyclica, as soon as the calendar of Scripture ceases to be the primitive. That could not be, so long as the chronology even of Scripture continued to be mixed up with that of surrounding nations: and there are many points of time, of much later date than the Exodus, when the primitive calendar and the æra cyclica are found still to reflect wonderful light even on the contemporary chronology of the Bible. It is sufficient for our purpose however to illustrate this connection between the chronology of Scripture and the æra cyclica and the primitive calendar, so long as the chronology

of Scripture itself was not yet referrible to any other æra, or to any other calendar, but that; that is, for the interval from the creation to the Exodus.

Let us only premise to the commencement of our undertaking, (as we feel bound in all reason to do,) that though we propose to illustrate Scripture, and we hope to illustrate Scripture, by what we are undertaking, we are neither so absurd nor so presumptuous as to suppose that we shall *verify* Scripture thereby. Whosoever thinks that Scripture may possibly be verified, must also be of opinion that Scripture may possibly be mistaken; nay more, that, if it cannot be verified and so far confirmed, it must be mistaken. We hold an opinion like that to be little less than blasphemy. Men may imagine that, when they shew the truth of Scripture by an argument or demonstration of any kind, they verify Scripture; though in reality they are not verifying or confirming Scripture; they are merely shewing it to be what it is; the truth itself. It is no more possible to verify Scripture than to verify truth; if that means to make truth more so than it is in itself. But the truth does not always appear to be the truth. The truth is not always acknowledged to be the truth. It may be possible to make it appear what it is; or so to exhibit it in connection with other things that it shall not any longer be denied to be what it is: and both these are services which the ignorance, the prejudices, the pride, and the self-conceit of men themselves have rendered only too necessary, to place even the truth of the Bible in its proper light. This too is the kind, and this is the substance, of the service which we hope, with God's blessing, to render to the truth of Scripture, by the inquiry on which we are proposing to enter: but even this after all amounts to no more than proving that Scripture is Scripture, and always was so; whether men have always acknowledged it to be so or not.

## SECTION II.—*On the idiom of Scripture, in speaking of years or of any number of years as so many days.*

It is the idiom or *modus loquendi* of Scripture to speak of *years* as *days*; to designate sums of years as sums of days; to make no difference apparently between noctidiurnal time

and annual. No one can have read the Bible even in the English version, (in which this distinction is not uniformly attended to,) much less in the original, and not have had occasion repeatedly to observe that, where the thing spoken of is and must be *years*, the language employed about it is and can be proper only for *days*.

Take for example the earliest instance of the idiom, which occurs in Scripture itself; viz. in the account of the sacrifice of Cain and Abel[a]. What the authorized version expresses by "And in process of time," the Hebrew expresses by "And at the end of days:" the thing intended, as all commentators, Jewish or Christian, are agreed, being "At the end of the year." Or take the next example on a much larger scale, in the chronological summary of the lives and deaths of the antediluvian patriarchs[b]: "And the days of Adam, after he had begotten Seth, were eight hundred years......And all the days that Adam lived were nine hundred and thirty years." Take a still more unquestionable instance of the same idiom, in the account of the proceedings preliminary to the marriage of Isaac and Rebekah[c]: "Let the damsel abide with us *a few* days, at the least ten;" which in the original is, "Let the damsel abide with us days or ten." And most commentators understand this to be meant of a year, or of ten months; though why the request should have been made, subject to such a qualification of a year or of ten months, no one has yet been able to explain; nor, without the light which the primitive calendar casts on the circumstances of this whole transaction, could any one have done so. And to mention no more examples of the same kind; in the account of the dream of Pharaoh, in connection with the history of Joseph in Egypt, "And it came to pass at the end of two full years," in the English version, is simply, "At the end of two years," (the dual of years,) "of days," in the Hebrew[d].

This idiom in our opinion is a striking proof of the philosophical propriety of the language of Holy Writ, in calling

[a] Gen. iv. 3. [b] Gen. v. 3–31.

[c] Gen. xxiv. 55.

[d] Gen. xli. 1. Just before, of the imprisonment of the butler and baker, xl. 4, "They continued a season in ward," in the original is, "And they were *days* in ward:" which we should understand to be meant of a year. See also Exodus xiii. 10, (at which time the year was still cyclical,) of the observance of the Passover; "Thou shalt therefore keep this ordinance in his season from year to year:" in the Hebrew it is, "from days to days."

things from the first by their right names. And every one else will probably be of the same opinion, who has only a correct idea of the nature of the primitive year. We have already explained that this primitive year was no measure of annual time, in the sense of mean natural or of mean Julian. But it was a perfect measure of noctidiurnal time. It was itself merely a cycle of days and nights, but always the same in number. It appears to us that this is the true explanation of the idiom in question, which is discoverable so early in Scripture; though neither its friends, nor much more its enemies, have yet been aware of that fact.

The word which is commonly used in the Hebrew language, to express what we mean by our word *year*, is derived from a root, the proper signification of which, according to Gesenius, is *to alter, to change*, or *to be changed.* The idea of variability, and consequently of instability, lies at the bottom of this vernacular Hebrew term for *year*. Now this is exactly the distinguishing characteristic of the cyclical, as opposed to the mean natural or to the mean Julian, year; that, fixed as it is in itself and always the same, with reference to either of these it is perpetually changing its appearance, and its relations; it is perpetually shifting its place in the months of the Julian year, and in the seasons of the natural: for which reason, as we have already observed, and for no other, (since no name could be less applicable to it in itself,) chronologers have commonly agreed to call it the vague, the erratic, or moveable year.

This mixture of the idea of changeableness with the proper signification of year in this Hebrew word Gesenius and others would account for, by referring it to the cycle of seasons in the natural year itself. But the seasons are only *parts* of the year. This word itself is never used except of the year in the complex. The parts of the natural year, in the sense of the seasons, might be said to exhibit these phenomena of changeableness; but the year itself could never be said to do so: since that continues always the same. Nor is changeableness, strictly speaking, predicable even of the parts of the natural year in the sense of the seasons; but merely order and succession. They come and go, it is true, but each in its turn; and each after the same interval of time: and

that is succession not changeableness, and invariable succession too. Besides which, the Hebrew language itself clearly distinguishes between Ssine the year, and the Thekoupheth essine[e]—the turn or trope of the year. This explanation of the idiom therefore, proposed by Gesenius, is inadmissible: and the Ssine of the Hebrew, the *annus vertens* of the Latins, the περιτροπέων ἐνιαυτὸς and even the ἐνιαυτὸς of the Greeks, and what we mean ourselves by the tropical year, including both the equinoxes and the solstices under the denomination of the tropes or turns in question, must be totally different things, and must have their foundations respectively in a totally different association of ideas.

We are persuaded therefore that the name of Ssine, or something to the same effect, is as old as the primitive year itself; and is one among other proofs that the antediluvian fathers of the human race were as well aware of the difference between a positive measure of annual time, like the equable, and the true physical unit of that description, as any chronologer at the present day. They did not confound the nominal solar year of 365 days with the natural; as modern chronologers in their ignorance of the truth have been apt to imagine. Nor is it any objection that this name of Ssine, and for this reason, having been originally given to the primitive solar year, was afterwards retained for the lunar. The lunar year exhibits the same phenomenon of changeableness, within certain limits, relatively to the natural or to the Julian year, as the primitive year itself. But it is one thing to impose a name at first, and another to retain and continue it in use. Many instances might be mentioned of names which have continued in appearance the same all along, and yet in reality have changed their meaning; of names in short, retained merely from the force of habit and out of deference to prescription, even when they have ceased to be strictly applicable to the subjects of which they are used; in the same sense at least as at first.

It is another illustration of the exactness of thought which pervades the language of Scripture, and altogether the same in principle as that which has just been pointed out; that the primary or elementary measure of duration by any thing

[e] 2 Chron. xxiv. 23.

but duration itself, which it recognises exclusively, is the Day and the Night. "The day *is* thine, the night also *is* thine[f]." "Hast thou commanded the morning since thy days, *and* caused the day-spring to know his place[g]?" "He hath compassed the waters with bounds until the day and night come to an end[h]." "If ye can break my covenant of the day and my covenant of the night; and that there should not be day and night in their season . . . . if my covenant *be* not with day and night, and if I have not appointed the ordinances of heaven and earth[i]." "For ask now of the days that are past, which were before thee, since the day that God created man on the earth[k]."

In this spirit and on this principle it is, that the course of time in heaven itself is supposed to be measured by days, and to stand or consist in days, the cycle of which never varies nor comes to an end: "That your days may be multiplied . . . as the days of heaven upon the earth[l]." "His seed will I make *to endure* for ever, and his throne as the days of heaven[m]." In fact to the apprehension of the Omniscient mind, as our own reason is competent to assure us, duration must appear in its primary elements whatsoever those are; and it must be contemplated by it in them; just as the universe of space in the *loci* of which it is the complex, and the universe of matter in the *atoms* of which it is made up.

For the same reason, when Scripture would define the limits of any interval of duration with the utmost possible precision, it is by days, or, in its own phraseology, by evening—mornings[n]. On the same principle even days in the language of prophecy are put for years[o]; and the week, which is properly the cycle of seven days, is used without qualification for a cycle of seven years[p]. And to mention no more instances of this idiom both of thought and of language, even the Eternal, whose existence is incapable of being measured by any thing but itself, yet to express that property of his nature in the simplest manner, and the most intelligibly to our own apprehensions, challenges comparison

f Ps. lxxiv. 16.
g Job xxxviii. 12.
h xxvi. 10.
i Jer. xxxiii. 20. 25: cf. xxxi. 35, 36.
k Deut. iv. 32: cf. Job viii. 8.
l xi. 21.
m Ps. lxxxix. 29.
n Dan. viii. 14. 26: xii. 11, 12, 13.
o x. 13.
p ix. 24–27.

with nothing but the *day*, (the measure of time of which we have the clearest idea,) but with the *day* as recurring in a perpetual cycle: "Yea, before the day *was* I *am* he[q]." And in the Book of Daniel[r] he is styled, (as if under his most appropriate and significant title,) not the Ancient of ages, or the Ancient of years, or the Ancient of months, but the ANCIENT OF DAYS.

## CHAPTER II.

### SECTION I.—*On the date of the sacrifice of Cain and Abel.*

THE first criterion of the time of the transaction recorded Gen. iv. 3-5, after what has been premised, it will be perceived is contained in the words, "And in process of time it came to pass[s]." These words should be rendered, "And at the end of days it came to pass:" and they will now be understood to mean, "And at the end of the year;" that is, of the cyclical year, the year which was strictly a cycle of days rather than a year. And the end of one cycle of this kind being necessarily the beginning of the next; it follows that the event ushered in in this manner, the sacrifice of Cain and Abel the account of which follows, happened critically between two cyclical years.

In the next place, forasmuch as a year of this description was liable to be constantly changing its relation to the natural year, the second criterion must be supplied by the nature of the transaction itself; which supposes a certain relation of its own to the natural year, and therefore a certain relation of the cyclical year to the natural year at the same time too. For this transaction is represented as an act of sacrifice; and this sacrifice as made partly of the fruits of the ground, and partly of the firstlings and fat of flocks: by the former of which must be meant the first ripe productions of the natural year, and by the latter the young of the sheep or of the goats, of the same year's increase also.

In the idiom of Scripture the fruits of the ground are

q Is. xliii. 13. r Chap. vii. 9. 13. 22. s iv. 3.

generally intended of the harvest of barley or of wheat; and there is no reason why one or other of these should not be supposed to be meant in this instance, whichsoever of the two is most agreeable to the circumstances of the account; which we apprehend to be barley harvest and not wheat. Now in Judæa, in particular localities of Judæa at least, it is well known the barley was commonly ripe, and in a state fit to be offered in the shape of the wave sheaf, on the second day of the Azyma the 16th of Nisan. We cannot suppose it would be less forward, at this period in the history of the world, for the climate of Eden, and in the immediate vicinity of the terrestrial Paradise.

In like manner it is also known that in Judæa the firstlings of the flock and generally of the same year's increase, wanted for the feast of the passover, and in numbers too of which we can form but a very inadequate idea, were ready every year at the proper time; at least as a general rule. The Rabbis have left it on record that if the state of the case was otherwise, if the barley was not yet sufficiently ripe, or if the yeaning season was later than usual; it was held to be reason sufficient for putting off the celebration of the passover from its proper month Nisan to the next to that, Jar: according to the provision, made indeed by the law itself[t], but evidently not for a case of frequent occurrence.

It was usually then the case in Judæa in after-times, that both the first fruits of the ground of a given year's increase and the firstlings of the flock were ready to be offered in sacrifice at the stated time of the passover; that is, at or about the vernal equinox; and that too even when the stated time of the passover anticipated the equinox, as it might do by two or three days. We cannot suppose that either vegetable or animal nature would be less forward in the same quarter of the world in general, within a century after the creation, in the vicinity of Paradise, and while the Paradisiacal state of things had scarcely yet ceased to be felt in the air and climate at least; nor the sweet and benignant influences which reigned in the interior of that favoured spot, (now indeed shut to man, or accessible only from a distance,) to be connected, by some secret sympathy, even with things without.

[t] Numb. ix. 6-14.

From the nature of the transaction then which now took place, and from the particulars of the sacrifice itself which was now made, we might certainly collect that it must have taken place in the spring of the natural year. If so, the head of the cyclical year must have been falling in the spring of the natural year. When however we consider that in the year of creation itself the first day of this year was falling on the mean vernal equinox, and that the equable year must necessarily recede on a fixed term in the natural at the rate of one day in four years; the question will necessarily occur, how long after the creation could such a transaction as this happen both at the beginning of the cyclical year, and in the spring of the natural year? The ripeness of the fruits of the ground, or the readiness of the firstlings of the flock, at this early period in the history of the world and in this locality more particularly, is not necessarily to be restricted to the vernal equinox. Both might be really offered, as they are described to have been on this occasion, some time before the equinox. Yet even for this period and for this locality some limit must be assignable to the possibility or to the probability of such a sacrifice as this, relatively to the equinox. We might consider it possible a *fortnight* before the equinox; but could we consider it so a month or more before it?

The next question then is concerning the probable age of Cain and Abel, when this sacrifice was offered by each of them respectively. It is clear from Gen. iv. 25. v. 3, that Abel was dead before the 130th year of the life of Adam, the year of the birth of Seth. Therefore this sacrifice was offered before A. M. 131. We may fairly conclude too, from the context of the whole account, Gen. iv. 3–16, that both Cain and Abel were arrived by this time at man's estate: though as to what was to be understood by man's estate, at this early period of human existence, when the life of man itself was prolonged so much beyond its ordinary length at present, a difference of opinion may very possibly prevail. We shall not err perhaps if we assume it as not later than the shortest of the intervals of the Pædogonia, specified in Gen. v.; that is, the age of 65. On this principle, the date of the transaction in question might have been as early as A. M. 66, yet could not have been as late as A. M. 131.

And this it appears to us would be the utmost degree of approximation to the actual date of the transaction, to which we should be enabled to attain, merely from the narrative of the book of Genesis itself, and without the assistance of any other part of Scripture. But the inspired author of the Epistle to the Hebrews has made this transaction the subject of a commentary of his own[u], through which we may possibly have it in our power to arrive at its true date.

For we learn from this commentary that there was something in the sacrifice of Abel offered on this occasion, which was wanting in that of Cain; and something of so much importance to the integrity of a sacrifice as to make it *πλείονα θυσίαν,* a more complete sacrifice, a sacrifice more of a sacrifice, than that of Cain: and yet that it was nothing in the sacrifice itself which made it so, but something in the author and offerer of the sacrifice; which something it calls his *faith:* *Πίστει πλείονα θυσίαν Ἄβελ παρὰ Κάϊν προσήνεγκε τῷ θεῷ.* And the same faith which made the sacrifice perfect of its kind entailed the acceptance of its offerer—*δι᾽ ἧς ἐμαρτυρήθη εἶναι δίκαιος.*

There was more then in the act of sacrifice now performed by Abel, than appears at the first view. It is not only the first act of sacrifice on record, but the first, of sacrifice offered in faith and made perfect by faith. It would manifestly be to digress from our proper work and business at present, to enter here on the question of the origin of sacrifice; especially of animal sacrifice in the sense of vicarious sacrifice; that is, of the intentional substitution of the blood of an innocent victim for the life of a guilty worshipper: and whether that was an idea which was likely or not likely to occur to men of themselves. Suffice it to say that, in our opinion at least, very serious and even insuperable difficulties would lie in the way of any supposed origin of vicarious sacrifice such as that: all which disappear and give way to a simple, a clear, and an intelligible explanation of the rise of an act of worship which has been every where practised by men alike, every where intended for the same purpose, and every where supposed to have been followed by the same

u xi. 4.

effect, if we assume that it was *positive* in the first instance; but prescribed and appointed by God himself.

The truth in reality appears to be this: That sacrifice in some sense or other is as old as the Fall. It does not appear that before the descent from the ark after the flood permission had yet been conceded to man to make use of animal food[x]. No one at least will suppose that such permission was given him in Paradise, or during the Paradisiacal state of things. Yet this very account of Gen. iv. 3. demonstrates that within less than 130 years of the fall animals were already offered in sacrifice; and not for the first time on this occasion merely: for the sacrifice which now took place, whether that of Cain or that of Abel, was evidently a stated and regular one; one which had always been performed at the end of days in particular. And when we read in Gen. iii. 21, immediately after the fall itself, even before we read of the expulsion of Adam and Eve from Paradise, that the LORD God made them coats of skins; what are we to infer from this statement except that these were the skins of animals, which had been previously offered in sacrifice? and therefore that sacrifice itself had been previously instituted? and if so, immediately after the fall. No one can consider this improbable, howsoever soon after the fall, who reflects for a moment on the great Scriptural truth, of which both the Old and New Testament are only the standing and perpetual exposition, and which his own conscience itself cannot fail instinctively to recognise and apply to itself, that never, since that fatal day when the relations of man to his Maker were changed from what they were at first to what they have been ever since, has God permitted any communication between man and himself except *in* and *by* sacrifice; nor does he even now permit any communication between man and himself except *in* and *by* sacrifice; *by* sacrifice, typical of that of Jesus Christ, before his appearance in the flesh; *by* sacrifice, even the great and true sacrifice itself, now that he has appeared in the flesh.

There is no difficulty therefore in supposing that, if sacrifice was to be thenceforward the only authorized mode of com-

x Gen. ix. 2–4.

munication between the Deity and his moral creation, it should have been instituted, and by their Creator himself, immediately after the Fall. But we could not assume that more would be done at first than simply to appoint this mode of communication; that is, to enjoin the rite. The order and course of the Divine proceedings, in this one article of the dealings of God with mankind, to our better knowledge and apprehension have long been cleared up by the event; the mystery which once enveloped the whole of this economy of vicarious sacrifice exists no more. We have had both the history of the postdiluvian Patriarchs, and the Levitical ritual, and above all the Great Sacrifice itself; which, as summing up and comprehending and perfecting in itself every form and variety of sacrifice besides, has put a stop to the rite altogether in any other way; and in the language of ancient prophecy has made both Menee and Zabee to cease[y]. We have had all this to interpret the meaning of the rite from the first, and to connect the beginning of this economy with the end. But the case might be very different, and probably was so, with our first parents, the contemporaries of the institution; and with their children. *They* might be left to the observance of the rite, as an act of submission to the declared will and to the express appointment of God: but as to the reasons of the institution, we cannot necessarily assume that those must all at once have been made known. It would be more agreeable to the analogy of the Divine proceedings, especially in the gradual development of the whole mystery of the scheme of Redemption, that these should be left for a time in intentional obscurity; as a means of trying both the understandings and the faith of men. And while that was still the case, sacrifice might be offered in the spirit of obedience, as to a Divine command, and so far be acceptable to God; but it could not yet be offered in FAITH: it could not yet possess that peculiar character of acceptableness which is the exclusive privilege of sacrifice offered in Faith; of Evangelical sacrifice; of sacrifice *before* the Law, as well as *under* the Law and *since* the Law, which derived and still derives all its efficacy from faith.

Now it appears to us that the first of the children of men

[y] Dan. ix. 27.

who thus superadded to a positive rite all that was wanting to make it complete; the first who penetrated into the secret meaning of this mysterious institution; the first who combined the promise of a future deliverer with a prescriptive and positive, and also exclusive, mode of communication with God, and, assisted by his grace, drew from both the evangelical sense and spirit of the letter of the rite; the first who discovered in the innocent victim, vicariously substituted for his own sins, the type and similitude of the Lamb without spot or blemish, slain from the foundation of the world: the first, we say, who drew these inferences, was Abel the Righteous. It would strictly be true therefore of this sacrifice of Abel's, to be the first which was ever offered in faith, in the Christian sense of that term; the first to be possessed of every condition to a plenary atonement for sin; the first to be available for the absolution of the worshipper on those terms, on which, and which alone, ever since the moment of the Fall, God himself has declared he will accept and forgive the worshipper. For which reason he was pleased to seal it by a visible token of his approbation, whatsoever that was, the first instance of the kind which is recorded in Scripture; which Moses expresses by God's having respect to Abel and his offering, and St. Paul by *μαρτυροῦντος ἐπὶ τοῖς δώροις αὐτοῦ τοῦ θεοῦ.*

If we are right in the view which we have taken of this transaction, it had an ulterior meaning and reference which connected it with the scheme of human redemption. It was a sacrifice, typical of the Great Sacrifice, not merely in the act or in the end and design of the act, but even in the immediate reference of the act: and it was the first too of that description which had yet taken place, how many instances of the same kind soever there might afterwards be. We propose it therefore, as a probable conjecture, that it agreed with that in the circumstance of time; and that, as the actual date of the former was April 5 and the feria 6ª, so the actual date of this was April 5 and the feria 6ª too.

In this case we must search for the year of its occurrence, when the primitive Thoth was falling on April 5, and both on the feria sexta: and we find that year in æra cyclica 83 = æra mundana 82 exeunte. At this time both Cain and

Abel must already have been come to man's estate. The mean vernal equinox indeed was still falling on April 24; but it was fast approaching to April 23: and though April 5 would thus be 19 days earlier than the equinox, no one could undertake to say that, at this period of the history of the world and for the climate of Eden, there might not be both ripe fruits of the ground, and firstlings of that year, ready to be offered on this day.

## CHAPTER III.

### SECTION I.—*On the date of* Gen. vi. 3.

IF it cannot be asserted with truth that the meaning of this declaration has never been rightly understood, it may be so that it has never been similarly understood; that various constructions have been put upon it, each of which cannot be the true. In our opinion the simple and obvious construction of the text conducts us to its real meaning: and according to this, from the time when those words were pronounced, it must be inferred that the Spirit of God also ceased to contend with human wickedness; and the existing race of mankind, the antediluvian world, the contemporaries of the patriarch Noah, as the just punishment of their own obduracy and of their own impenitence, were left to themselves; to follow the bias and inclination of their own nature in all things, and in due time to reap the fruits of their obstinacy and infatuation.

It is implied in these words of Holy Writ, pronounced by the mouth of God himself, that there is a nature in man which requires to be constantly resisted and kept in check, because it is constantly prompting him to evil; which nature, (agreeably to the idiom of Scripture in every subsequent allusion to it,) in this first instance of any such allusion which occurs in the Bible, is called FLESH. It is implied too that what resists and keeps in check this nature of flesh in man, this tendency to evil perpetually, is the Spirit of God. And it is a just and a necessary inference from these two im-

portant truths, (each of them plainly implied in this one declaration,) against the Calvinist, and against all who would limit the extent and the universality of the operation of this salutary controlling principle; that, as it must be wanted by all who inherit the nature of flesh, so it is extended to all, and operates for the benefit of all; if they do not wilfully deprive themselves of it by obstinate resistance and impenitence.

But we must also collect from these words that even this principle of resistance to the corrupt bias of human nature will not strive against it for ever, if it must strive with it constantly in vain: that there is a limit prescribed to human obduracy, beyond which it is no longer proper to be tolerated, even by the patience of God himself; it is no longer compatible with his attributes themselves that his grace should continue to strive with the nature within us. The antediluvian world had reached that fatal limit, when these words were pronounced. It was not possible for infinite goodness itself to contend any longer with such perseverance in evil as theirs. From the time therefore when they were pronounced, the Spirit of Grace, the principle of resistance to the nature within them, was to be withdrawn; and they were to be left to themselves. But what is man, abandoned by the grace of God, and bereft of the only true principle of life and light, which, under other circumstances, has never been denied him, not even in consequence of the fall, nor ever been withdrawn from him except in an extreme case like this: What is he, we demand, but a devil? whom the law of his moral nature necessarily inclines to evil.

It is clear then that the doom of the antediluvian world was sealed when these words were pronounced. It pleased the Deity however, even when he pronounced their sentence, to suspend its execution; and to prescribe the period of 120 years before it should be carried into effect. Into the reasons of this dispensation it would not become us to inquire, beyond what has been revealed. One thing however is certain; that when this sentence was pronounced, though its execution was suspended for this period of 120 years, neither had the ark begun to be built, nor was any one of the sons of Noah as yet born.

The first inference therefore respecting the date of these words, which we appear to be authorized to draw from them, is that they could not have been pronounced *less* than 120 years before the date of the deluge, which was the execution of the sentence at last. But forasmuch as they were penal and decretory, and the terms of all penal and final declarations are to be literally and strictly interpreted; another inference from them is that, if they could not have been pronounced *less* than 120 years before the deluge, neither could they have been pronounced *more*. The date of the deluge was æra cyclica 1658: and therefore the date of this declaration on this principle must have been æra cyclica 1538.

The period of 120 years is that which generally measures the recession of a given cyclical date on a given natural one, or a given Julian one, by the extent of one cyclical month or interval of 30 days. We say *generally;* since under particular circumstances it may be a recession of 29 days instead of 30. The date of the entrance of Noah into the ark in the cyclical style was Phaophi 10 æra cyc. 1658: that of the deluge itself Phaophi 17. If then these 120 years expired not with the entrance into the ark but with the beginning of the flood, they expired Phaophi 16 æra cyc. 1658; and therefore they began Phaophi 17 æra cyc. 1538. Phaophi 16 æra cyc. 1658 answered to May 4, according to the Julian rule, at midnight: Phaophi 17, æra cyc. 1538, to June 2, at midnight also; just 29 days earlier. And as Phaophi 16, æra cyc. 1658, was the feria secunda of the hebdomadal cycle, so was Phaophi 17 æra cyc. 1538; and these words were pronounced on the same day of that cycle, æra cyc. 1538, on which the 120 years expired æra cyc. 1658.

Much light is reflected on this passage of the olden Scripture also, by the commentary of St. Peter upon it in the New [a]. The period of long-suffering, (that is, of the continued patience and forbearance of God even towards those who were already ripe for destruction,) alluded to there, is no doubt this period of 120 years; during which the sentence of the antediluvian world, though already pronounced, was still suspended. But we learn further from the same allusion to this period, that the process of building or

[a] 1 Pet. iii. 19, 20.

preparing the ark also was commensurate with it, either wholly or in part; that Noah was preparing the ark, while God was thus forbearing with those who were already deserving of destruction: and therefore that Genesis vi. 13–22 bears date from the same point of time as Genesis vi. 3, or nearly so.

We can discover nothing ourselves to object to this supposition, even though it should be considered to be implied thereby that the process of constructing the ark took up the whole or the principal part of these 120 years. We cannot suppose that the ark itself was the work of any but Noah and of his own family—that is, his sons: the eldest of whom was born only 100 years before the flood. In this case it would be necessary to calculate with the utmost exactness, (what probably no one ever yet thought of doing,) what length of time it would require three or four persons at the utmost to construct a vessel of such dimensions and of such capacity as the ark; confessedly the largest of its kind which was ever built.

## CHAPTER IV.

### SECTION I.—*On the chronology of the year of the deluge.*

WITH respect to the true year of the deluge, we assume at present that it was æra cyclica 1658 A. M. 1657 B. C. 2348. We are aware that this is not to be taken for granted without proof; but we reserve the proof for a future opportunity.

But as to the details of this memorable year, mention is more than once made in the scriptural account of the flood of periods or intervals of *seven* days; from which commentators have seen reason to infer not only the division of time by cycles of seven days, but also the observance of the sabbath, at this period of the history of the world.

For example; it appears that Noah sent the raven out of the ark first of all [b]; and after the raven the dove [c]: and though it is not distinctly stated how long after he had sent out the raven this was done, yet it is said in so many words

[b] Gen. viii. 7.

[c] Ib. 8, 9.

that, having sent out the dove this once for the first time, "he stayed yet other seven days[d]," and then sent it out again: from which it must necessarily be inferred that he had stayed or waited some seven days before he sent out the dove even for the first time; and if so, after he had sent out the raven. There was seven days' interval then between the sending out of the raven and the first sending out of the dove; and the same between this first sending out of the dove and the second. And it further appears[e] that there was a third interval of seven days between its emission the second time and its emission the third time.

There is consequently in the scriptural account of the events of the year of the flood evidence of three cycles of seven days each in succession, between the sending out of the raven at first, and the last sending out of the dove; which cycles appear to be intended of hebdomadal cycles or weeks; are capable at least of being understood of weeks, in the strictest sense of the word. The only uncertainty respecting these weeks would be whether they were reckoned from the first day of the hebdomadal cycle or from the seventh: and the *prima facie* construction of the text of Scripture, we admit, would be adapted to either of these suppositions.

It appears however from Gen. viii. 5, compared with 6, 7, that the raven was sent out from the ark at the end of forty days after the first appearance of the tops of the mountains above the waters: and as the date of that appearance was the first day of the tenth month[f], (the first of the primitive Paüni,) it follows that the raven must have been sent out on the *eleventh* of the eleventh month; (Epiphi 11;) from which we obtain the date of the first sending out of the dove, seven days after, Epiphi 18; that of the second, Epiphi 25; that of the third and last, the second of the twelfth month, Mesore 2: and each of these either the seventh day of the week, properly so called, or the first.

To decide between these hypotheses, and to ascertain the real state of the case, we have extracted from our chronology of the Old Testament so much as relates to the particulars of these transactions, from the entrance of Noah into

[d] Gen. viii. 10. [e] Ib. 12. [f] Ib. 5.

the ark to his descent from it again; which we here subjoin, together with the primitive calendar both for the year of the deluge, and for the first three months of the year after it.

SECTION II.—*Calendar of the primitive civil year,* Æra cyclica 1658 A. M. 1657 B. C. 2348. Dom. lett. D.

| Months | Days | Midnight | Midnight | Feria | B. C. |
|---|---|---|---|---|---|
| i Thoth ...... | 30 | March 20 .... | Friday .... | 6 | 2348 |
| ii Phaophi .... | 30 | April 19 .... | Sunday .... | 1 | .. |
| iii Athyr ...... | 30 | May 19...... | Tuesday .. | 3 | .. |
| iv Chœac...... | 30 | June 18 .... | Thursday .. | 5 | .. |
| v Tybi ...... | 30 | July 18...... | Saturday .. | 7 | .. |
| vi Mecheir .... | 30 | August 17.... | Monday .. | 2 | .. |
| vii Phamenoth .. | 30 | September 16 | Wednesday | 4 | .. |
| viii Pharmuthi .. | 30 | October 16 .. | Friday .... | 6 | .. |
| ix Pachon .... | 30 | November 15 . | Sunday .... | 1 | . |
| x Paüni ...... | 30 | December 15.. | Tuesday .. | 3 | .. |
| xi Epiphi...... | 30 | January 14 .. | Thursday .. | 5 | 2347 |
| xii Mesore .... | 30 | February 13 .. | Saturday .. | 7 | .. |
| xiii Epagomenæ | 5 | March 15 .... | Monday .. | 2 | .. |

*Calendar of the first three months of the year after the flood,* Æra cyc. 2659 A. M. 1658 B. C. 2347. Dom. lett. C.

| Months | Days | Midnight | Midnight | Feria | B. C. |
|---|---|---|---|---|---|
| i Thoth...... | 30 | March 20 .... | Saturday .. | 7 | 2347 |
| ii Phaophi .... | 30 | April 19 .... | Monday .. | 2 | .. |
| iii Athyr...... | 30 | May 19...... | Wednesday . | 4 | .. |

*Chronology of events, from the entrance of Noah into the ark to his descent from it again, in the equable or cyclical style and in the Julian.*

A. M. B. C.

1657 2348 Noah is commanded to enter the ark.

Gen. vii. 1–4. 10, 11.

Tenth of the second month, or Phaophi.

Monday, April 27, at 18 hours.
Tuesday, April 28, at 18 hours.

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Entrance of Noah into the ark. Beginning of the resort of animals unto him.

Gen. vii. 5. 7–10. 13. 16.

Tenth of the second month, or Phaophi.

Tuesday, April 28.

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The door of the ark is made fast by God.

Gen. vii. 16.

Seventeenth of the second month, or Phaophi.

Monday, May 4, at 18 hours.

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Beginning of the flood of waters. Forty days' and forty nights' rain.

Gen. vii. 4. 10, 11, 12. 17–23.

Seventeenth of the second month, or Phaophi.

Tuesday, May 5, at 6 A. M.

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End of the forty days' and forty nights' rain.

Gen. vii. 4. 12. 17.

Twenty-seventh of the third month, or Athyr.

Sunday, June 14, at 6 A. M.

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| A. M. | B. C. | |
|---|---|---|
| 1657 | 2348 | End of the 150 days' prevalence of the waters upwards.<br>Gen. vii. 24: viii. 3. 1, 2.<br>Seventeenth of the seventh month, or Phamenoth.<br>Friday, October 2, at 6 A. M. |
| | | The ark rests on Mount Ararat.<br>Gen. viii. 1–4.<br>Seventeenth of the seventh month, or Phamenoth.<br>Friday, October 2, after 6 A. M. |
| | | Appearance of the tops of the mountains.<br>Gen. viii. 5.<br>First of the tenth month, or Paüni.<br>Tuesday, December 15, cir. 7 A. M. |
| 1657 | 2347 | End of the next forty days. Opening of the window of the ark, and emission of the raven.<br>Gen. viii. 6, 7.<br>Eleventh of the eleventh month, or Epiphi.<br>Sunday, January 24, cir. 6 A. M. |
| | | End of the first cycle of seven days. First emission of the dove.<br>Gen. viii. 8, 9, 10.<br>Eighteenth of the eleventh month, or Epiphi.<br>Sunday, January 31, 6 A. M. |
| | | End of the second cycle of seven days. Second emission of the dove.<br>Gen. viii. 10.<br>Twenty-fifth of the eleventh month, or Epiphi.<br>Sunday, February 7, 6 A. M. |

A. M. B. C.

1657 2347 Return of the dove in the evening, with the fresh-olive-leaf in its mouth.

Gen. viii. 11.

Twenty-sixth of the eleventh month, or Epiphi.

Sunday, February 7, after sunset.

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End of the third cycle of seven days. Third emission of the dove.

Gen. viii. 12.

Second of the twelfth month, or Mesore.

Sunday, February 14, sunrise.

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The drying of the earth begins to be complete.

Gen. viii. 13.

First of the first month, or Thoth.

Friday, March 19, at 18 hours.
Saturday, March 20, at 18 hours.

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Noah removes the covering of the ark.

Gen. viii. 13.

Second of the first month, or Thoth.

Saturday, March 20, at 18 hours.
Sunday, March 21, at 18 hours.

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1658 2347 End of the first year of Noah in the ark.

Gen. vii. 5.

Tenth of the second month, or Phaophi.

Wednesday, April 28, midnight.

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A. M. B. C.

1658 2347 The drying of the earth is complete.

Gen. viii. 14.

Twenty-seventh of the second month, or Phaophi.

Friday, May 14, at 18 hours.
Saturday, May 15, at 18 hours.

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Noah is commanded to go forth from the ark.

Gen. viii. 15–17.

Noah descends from the ark.

Gen. viii. 18, 19: ix. 18.

Twenty-eighth of the second month, or Phaophi.

{ Saturday, May 15, at 18 hours.
{ Sunday, May 16, at 18 hours.

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It thus appears that the three cycles of seven days in question were strictly *weeks;* beginning in each instance on the first day of the hebdomadal cycle, and ending on the last. We consider this to be demonstrative proof not only of the truth of our calendar, but also of the patriarchal observance of the Sabbath.

It appears moreover[g] that the drying up of the waters from the surface of the ground had already begun and already made some progress on the first of the primitive Thoth in the second year; the limits of which, according to the primitive rule, were Friday March 19 at 18 hours—Saturday March 20 at 18 hours: but that this process was complete, and the surface was thoroughly dry again, only on the 27 of Phaophi, Friday May 14 at 18 hours—Saturday May 15 at 18 hours. It appears also that Noah removed the covering of the ark, and so became aware of what was going on, on the first of those days[g], but did not receive the command to leave the ark, until after the second: and that being Saturday May 15, there is no reason why we may not

[g] Gen. viii. 13, 14.

suppose the command to descend from the ark to have been given the next day, Sunday May 16; and the descent to have taken place on that day accordingly.

On this principle too, the date of the sacrifice of Noah, (the first thing done and the first which is recorded after the descent[h],) and that of the solemn ratification of the covenant by which it was followed[i], may well be supposed to have been the same day also; Phaophi 28 æra cyc. 1659 May 16 A. M. 1658 B. C. 2347, the *feria prima*. To this day inclusive from April 28 (on which day Noah entered the ark the year before) exclusive, the interval in Julian time would be one year and 18 days exactly.

## SECTION III.—*On the date of the full moon of May in the year of the deluge.*

The constitution of the terraqueous globe from the creation to the deluge must always be an uncertain point; not indeed with respect to the question in general whether the habitable globe was divided from the first into land and sea, but whether the parts of the division were the same from the first as at present; whether the dry land and the sea were distributed over the surface of the globe in the same manner at first as at present; and whether the proportion of one to the other was always the same or not. On these questions the discoveries of modern geology do not seem competent to throw much light; because the researches of geology are confined principally to the interior of the earth, and to the phenomena there perceptible: but these questions concern the exterior, and the state of that exterior too 6000 years ago; which in the ordinary course of things alone, and without any such extraordinary convulsion as the deluge, it might be supposed must have been very different from what it appears to be at present.

An unprejudiced reader of the Scriptural account of the creation, who did not pretend to more knowledge on points of such an antiquity as these than what was to be obtained from the only contemporary and the only infallible source of information concerning them, (which is Scripture itself,)

h Gen. viii. 20—22.

i Gen. ix. 1—17. Isaiah liv. 9.

would naturally infer from Gen. i. 2, that before the creation the entire globe of the earth was submerged in water; the entire surface was covered with water. He would collect from Gen. i. 9. that the separation of the dry land from the water was the act of the third day; and, what is more to our purpose at present, from the words of command[k] which preceded that separation, "Let the waters under the heaven be gathered into *one* place, and let the dry *land* appear;" he would naturally infer that the separation itself was carried into effect by collecting the waters into *one* receptacle, forming one sea; and by leaving the dry land, as opposed to them, in the state of one large continent. If so, from the time of the creation down to that of the deluge, the division of the terraqueous globe might be the same in general as it has been ever since; but in particular it must have been different. The dry land, before the flood, formed only one great continent or *terra firma;* the waters, before the flood, only one great sea.

It is inconceivable however that between the creation and the present day such a convulsion of nature and of the established system of things as the universal deluge could have taken place; and yet the surface of the globe in general and the division of land and sea in particular not have been affected thereby; and permanently affected too. We read in Scripture that the windows of heaven were opened on that occasion[l], (doubtless for the first time until then, even though this opening of the windows of heaven for the first time *now* should require to be understood of the first precipitation of the vapours of the atmosphere, since the creation[m], in rain;) and, what is still more significant and more to the purpose, we read also that the fountains of the great deep were broken up[l]. For what was this great deep but the same thing which in the account of the work of the third day[n] was

[k] Compare with these Ps. civ. 5—9, which it appears to us are much more properly to be referred to this work of the third day of the hexaëmeron, and to the instant obedience yielded to those words of power, by the whole of the aqueous element, at that time in undisputed possession of all the earth, than to any thing which can possibly be supposed to have happened during the year of the flood.

[l] Gen. vii. 11: viii. 2. Cf. Malachi iii. 10: 2 Kings vii. 2: Isaiah xxiv. 18: Ps. lxxviii. 23: cxlviii. 4: Jer. x. 13: xiv. 22.

[m] Cf. Gen. ii. 5, 6: ix. 13—17.

[n] Gen. i. 10.

called *seas;* the collection of waters formed at that time; all one mass, all comprehended in one vast reservoir[o]? What was it but the multitudinous deep? that being the proper meaning of the word which is rendered deep; the deep of multitude, as Gesenius himself explains it. The great deep of Scripture is the multitudinous sea: that vast and incalculable congeries of aqueous particles, which serves as a counterpoise in its proportion to the atoms of the terrestrial globe; a collection which however vast and innumerable to our apprehension, at first nevertheless was only one mass, *μία συναγωγὴ ὑδάτων,* confined as yet to one reservoir or bed[p].

If this mighty assemblage of the watery element, if the Indian, the Pacific, the Atlantic ocean, (and whatsoever name may now be given to some parts of this collection and not to others,) were all brought up on the earth at once; who can be so blinded by prejudice as to suppose that they would not produce a great and lasting impression on its surface? though it might still be confined to the surface. Were this the proper place to enter minutely on such questions as these; it might perhaps be shewn that in a particular instance this effect was actually produced. It has pleased the Spirit of truth that one part of the geography of the antediluvian surface of our globe should be left on record, plainly and intelligibly characterised; and that is the site of the terrestrial Paradise.

The natural landmarks of that site were not merely the Eden of Scripture, (the desert of Syria and Arabia Felix still,) but the four rivers, so particularly described by Moses: and though one of these only, Phreth or Euphrates, survived the flood, yet even one is sufficient to answer the purpose of designating the boundaries of paradise, of which this river constituted one. The name of Hiddekel too, another of these rivers, still survived in the oriental name of the Tigris: though the postdiluvian Tigris was not the same as the antediluvian Hiddekel; it was only the name of that river which approached nearest to identity after the deluge with the Hid-

o Cf. Prov. viii. 28, 29: Amos v. 8: ix. 6: Ps. xviii. 15: Job xii. 15: Ezek. xxvi. 19.

p Cf. Ps. xxxiii. 7: xcv. 5. 4: civ. 6. 8. cxxxv. 6: cxlviii. 7.

dekel of paradise. With respect to the other two, the Phison and the Geon, both the name and the reality of the former were obliterated by the deluge; and it is in vain to search for it either in the Phasis of after-times, or in the Indian Ganges as Josephus does[q]. The name of Geon was very generally given to the Egyptian Nile[r]; and it is still traditionally given to it in Egypt[s]: and we freely confess that the Geon of paradise and the Nile of Egypt probably had something in common; as much at least as the Hiddekel and the Tigris. But the Nile notoriously runs to the north, and falls into the Mediterranean sea: the Geon of paradise, if we are not mistaken, ran to the south, and fell into the Indian ocean: and its course may even now be probably traced in that of the Sinus Arabicus itself*.

* If the truth had been fully revealed to us upon this question of the original site and original boundaries of the terrestrial paradise, and of its subsequent disposal, as well as of its first formation, perhaps it would have been found that the principal part of its site is now the Mediterranean sea; which before the flood had no existence. On this principle, the greater part of paradise must have been submerged at the Deluge; so much only being suffered to survive that catastrophe, as was already intended in the Divine purpose to become the habitation of the chosen people of God, that is, his church; while that was confined to the Jews.

The final end of the deluge, over and above the immediate purpose contemplated by it in punishing the wickedness of the antediluvian race of mankind, we may conjecture (though with all humility and diffidence) might very possibly be to fit and prepare the terraqueous globe itself for the habitation of man, on a larger scale than before; and under very different circumstances from those of the world before the flood: i. e. as no longer forming one family however large, congregated on one spot and speaking one language, but as broken up and divided into innumerable distinctions; as dispersed over the face of the whole world; and as speaking different languages; and as destined to fulfil very different parts in the economy of the future. Innumerable alterations in the exterior surface of the earth, innumerable adjustments, which Omniscience only could know to be required, and Omnipotence only could execute, might be necessary for this purpose: of which the deluge supplied the occasion, and possibly, in the hands and under the direction of God, even the instrumental means —while it was also fulfilling its first and proper purpose. The dispensa-

q Ant. Jud. i. i. 3. Cf. Eccles. xxiv. 25.

r Ecclus. xxiv. 27.

s Cf. Theophilus ad Autolycum, ii. cap. xxxiii. Josephus loc. cit. Prosper Alpinus, De Rebus Ægypt. lib. i. cap. i. p. 34. *Lugd. Bat.* 1735.

The state of the case then before the flood being this, that the *terra firma* or dry land constituted one continuous mainland or continent, the waters one great ocean, if it pleased the Deity to make use of instrumental means in one respect, to bring about the deluge; viz. the precipitation of the vapours of the atmosphere in torrents of rain; (with submission and diffidence let us venture to express such an opinion,) it might possibly please him to make use of such means in another respect; viz. the power and influence of the lunar and solar attraction, to which the great deep, under ordinary circumstances, is notoriously subject. This power and influence is the physical cause of the tides; of that constant rolling and oscillation backwards and forwards of the waters of the sea, which we mean by the flowing and ebbing of the tides. The physical astronomer tells us that the natural tendency of these waters, in obedience to the impulse of the lunar and solar attraction, is to rise in one great conical mass; the apex of which is constantly directed towards the moon; and to follow the moon all round the globe in the apparent direction of the diurnal rotation, i. e. from east to west; and to rise in this manner upon every meridian, as the moon comes to each in succession: and that were there nothing *ab extra* to interfere with this tendency they would do so.

It is easily to be seen from our general Lunar Calendar, Period vi, cycle viii, 4, that the principal mean new moon, A. M. 1657 B. C. 2348, would bear date April 21 at 18 hours; and therefore the full of that moon, cyclically reckoned, between May 5 at 18 hours, and May 6 at 18 hours: and May 5 being the Julian date of the beginning of the flood, it follows from this coincidence that the beginning of the flood and the full of the moon, according to our general Lunar Calendar, must have fallen out nearly together. We have thought it worth while therefore, to calculate the true full moon of the month of May for the meridian of the ancient Jerusalem; according to the method which we have employed for such purposes in other instances of the same

tion of the Deluge has never yet been considered in this light: and yet it is but just and reasonable that it should be. And how much does it enhance our admiration of the goodness of God, in the midst of his judgments themselves!—when contemplated in this point of view.

kind, and by means of the Tables which we have ourselves compiled[t]. The result of this calculation (the elements of which are exhibited elsewhere) is that the moon was at the full, for the meridian in question, within 50 minutes of midnight apparent time, May 6: 18 hours, as we reckon, after the beginning of the deluge itself. We do not undertake to vouch for the absolute accuracy of this result; but we think it cannot be far from the truth.

We are persuaded that nothing can be regarded as destitute of interest or importance, which is calculated to throw any light on the circumstances of so awful and memorable an event as the Deluge of Scripture; and that neither our readers in general, nor the astronomers in particular, will consider us to blame for having called their attention to the lunar character of the primitive cyclical date of the event, and through this, to that of the Julian; the nature of the event itself being such that if, for any reason, it must be connected with some known physical agency calculated *a priori* to produce such an effect, or to conspire in its place and degree with other and more powerful and more direct causes of the effect, that physical agency must have been the tides of the sea. Almighty power indeed has no need of any instrumental or secondary agency in enforcing the obedience of its creatures, material or immaterial, animate or inanimate, to its own will. A word spoken by the mouth of God would have been infinitely more effectual to bring up the waters of the ocean on the earth, than the attraction of a thousand suns and a thousand moons. At the command of that word, on the third day of the hexaëmeron, they had returned to their bed, and had left bare the surface of the earth, all in one day; and, at the command of the same word, they would again have left their bed, and would again have overspread the surface of the earth, in one day too. But we do not know that the work of the deluge was done in one day; or rather we have reason to believe that it was not: that the rain descended for forty days, and that the waters went on increasing in altitude for 150 days before they ceased to rise any higher; and then, and not until then, was the work of the deluge done. It is certain at least that the moon was

[t] See the account of them in the Introduction to the Tables.

at the full within less than 24 hours from the beginning of the deluge itself. That fact may be asserted with confidence. The question is, was this coincidence fortuitous, or purposely appointed? No one can hesitate to answer, it was purposely appointed: it must have been foreseen and preordained from all eternity. If so, the next question should be, what end was probably designed to be answered by the coincidence? And this is a question which we leave to the astronomers to answer; hoping only that, if they answer it at all, it will be with that reverence and that caution and fear of offending which become even the wisest of men, when they are attempting to conjecture or explain the reasons of the proceedings of God.

If the tides follow the course of the moon, and the waters of the sea at this time constituted one great and undivided ocean; the nearest part of that to the birthplace of mankind, the Eden of Scripture, would be that which is now called the Indian Ocean: and, if the great tidal wave of the deluge really set in from that quarter, its course at first would be from south-east to north-west; and there would be nothing to oppose its progress until it arrived at the mountainous barrier, which, under the name of Amanus and Taurus, runs across Asia Minor from south to north. The ark might be taken up by it in its progress in that direction: and under the safe conduct and guidance of the Divine Providence might be securely deposited at last on the highest point of the mountainous ridge in question, the Ararat of Scripture; where, if ancient testimony is to be believed, its remains were still to be seen more than 2000 years afterwards.

### SECTION IV.—*On the date of the return of the dove to the ark, with the olive leaf in its mouth.*

No incident in this memorable year of the deluge is so striking, and yet so pleasing and interesting on every account, as this, of the return of the dove to Noah in the ark, on the second occasion, with the leaf of olive in its mouth [u]: and there is none which does more to illustrate and confirm the chronology of this whole year, than this apparently slight circumstance itself.

To understand however in what manner it serves this

[u] Gen. viii. 11.

purpose, we must begin with obtaining a clear idea of what that was, which the dove is said to have brought back with it on this second occasion. Josephus has rendered it by *θαλλὸν ἐλαίας* [y]: which we may safely pronounce to be an inaccurate version of the Hebrew: for *θαλλὸς ἐλαίας* would be a branch of olive: but the original word for it does not mean a branch, nor even a twig, of olive. The Septuagint has translated it by *φύλλον ἐλαίας*: and had it been satisfied with that, we might have had nothing to object to the version. But it adds, *κάρφος, ἐν τῷ στόματι αὐτῆς*: and this we do not hesitate to reject as a gloss, totally unauthorized by the original, and founded in the mistaken idea that this olive leaf was a dry leaf, or even a dry twig of olive wood, picked up from the ground, or broken off from some tree; that being the proper sense of *κάρφος* in Greek; a small fragment of wood, a chip, a straw; or such dry twigs, as certain kinds of birds make use of to build their nests withal.

The true meaning of this word in the Hebrew is that of a leaf; and yet not merely of a leaf in any state of the natural existence of leaves, but of a leaf of the spring; of a *green* leaf, of a leaf still fresh from the parent tree. It is derived from a verb of common occurrence in Hebrew in the sense of to *go up* or *ascend;* for which reason, in one instance, the ὁ render it *ἀνάβασις*, instead of *φύλλον* [z]. It refers us at once therefore to the ascent of the sap in trees, as the idea which lies at the bottom of the word itself; to the annual revival of that circulation which is the life of the vegetable world, as the blood is that of the animal: a circulation which returns to the roots of trees in the autumn or winter of the natural year, and begins to rise again in the early spring; producing its first and most direct effect in the opening of those buds into leaves or flowers, which had been formed in the fall of the preceding year. The idea of a leaf, conveyed by a word so derived as this, could be nothing but that of a green leaf. The word is first used in Scripture at Gen. iii. 7. in the account of the fall: to describe the leaves of the fig tree at a time of the year, which we shall see hereafter, we trust, was some days before the equinox of spring: and the next instance of its occurrence is this place of Gen. viii. 11.

The inference respecting the natural state and natural

y Ant. Jud. i. iii. 5.

z Ezekiel xlvii. 12.

character of this leaf, deduced from the etymon of the word itself applied to it, is confirmed by what is also implied of the manner in which the bird which brought it to the ark had become possessed of it. It had not been picked up from the ground as the Septuagint seems to have thought; nor yet detached from the tree without violence, as might easily have been done in the fall of the year, when the least breath of air is sufficient to loosen the hold of the leaves on the trees; but it had been *plucked* or *torn* from the tree. The word *tereph,* which is used to describe the act of obtaining it, denotes *to tear.* Violence therefore to a certain extent had been necessary to detach this leaf from its proper tree; and violence is necessary to separate leaves from the parent tree only in the spring, and on the first rise of the sap; or while the sap still continues to circulate in the fibres of the leaf. For this reason Gesenius would render even *tereph* in this passage as if it were an epithet of the leaf itself, in the sense of *fresh* or *recent;* and that sense would suit the purpose of our argument quite as well as that of *torn:* for a fresh leaf is necessarily a green leaf, and a fresh and a green leaf is necessarily a leaf of the early spring. Our own translators have rendered it in a similar manner in another instance, Ezekiel xvii. 9; and they might have so rendered it in the present instance, if they had thought proper to do so, without any detriment to the sense of the passage in general: though, notwithstanding the authority of Gesenius, we are of opinion that they exercised a sounder judgment, and entered more truly into the spirit and meaning of the original, when they determined to render it by "pluckt off."

We affirm then that in this most simple yet most pleasing incident, thus naturally and simply related, we possess an intimation of the season of the year to which the incident itself belongs; not the less significant for being indirect and inferential only. It could not be earlier than the time when leaves begin to expand themselves on trees. But what time would that be, especially in the east; and for the climate of Armenia, or of those regions which lie round about Armenia, Asia Minor, Mesopotamia, and Syria?

In the lunar calendar of the Arabians, older than Islamism, there was a month called Shaaban; which derived its name from the ascent of the sap in trees, and from the expansion

of leaves and flowers in that month. Its Julian terms were February 20 and March 22. The Jews have one day in their calendar, which they style the new year's day of trees. Its date is Sebat 15; the middle day of the first month next after the solstice of winter. The second month in the Attic calendar was called Anthesterion; a name which explains itself, as the month of flowers; and equally so of leaves; which are no where later in making their appearance than flowers, on a large scale at least. The limits of this month too were February 17 and March 19. The Jewish month Adar occupied a site in the natural year very little different from that of Anthesterion: and this too derived its name (denoting glory or magnificence) from the natural phenomena of the month; the verdure, the flowers, the luxuriance and beauty of nature itself, in this month. It is the month which Solomon describes in those well known verses of his Song of Songs[z]: "For, lo, the winter is past, the rain is over *and* gone; the flowers appear on the earth; the time of the singing *of birds* is come, and the voice of the turtle is heard in our land. The fig tree putteth forth her green figs, and the vines *with* the tender grape give a *good* smell." In the Gelalean correction of the Persian calendar, the second month, Ardebehisht-mah, was the month in which roses bloomed; and therefore it is called by the Persian poets the Rose Month: yet Ardebehisht-mah could never in that calendar be more than 30 days later than the vernal equinox. If roses bloom in Persia 30 days after the vernal equinox, when do the trees first begin to put forth their leaves? In our own country the rose seldom blows, even in our gardens, before the end of June; yet the leaves appear in March, and sometimes even in February *.

* In Egypt, according to the testimony of the ancients, or in certain parts of Egypt, in the natural course of things, the leaves of trees of all kinds are represented as perennial, or nearly so.

*Περὶ γὰρ Ἐλεφαντίνην οὐδὲ τὰς ἀμπέλους οὐδὲ τὰς συκᾶς φασι φυλλοβολεῖν*[b].—*Ἔνια δὲ οὐκ ὄντα τῇ φύσει παρὰ τὸν τόπον ἐστὶν ἀείφυλλα. καθάπερ ἐλέχθη περὶ τῶν ἐν Ἐλεφαντίνῃ καὶ Μέμφει. κατωτέρω δὲ ἐν τῷ Δέλτα μικρὸν πάνυ χρόνον διαλείπει τοῦ μὴ ἀεὶ βλαστάνειν*[c].—Item contra atque apud nos fieri ad Elephantinam, ut neque ficus neque vites amittant folia[d].—

[z] ii. 11–13.

[b] Theophrastus, H. Pl. i. cap. iii. § 5.

[c] Cap. ix. § 5. Cf. iii. cap v. § 4.

[d] Varro, De Re Rustica, i. vii. § 6. *Gesneri*, 1735.

Now the date of the mean vernal equinox, A. M. 1657, as our Fasti Catholici shew, was April. 12, 3h. 59m. 2s. 24th. for the meridian of Jerusalem: and consequently that of the mean winter solstice, January 11, and that of the true, January 9*. The date of this second emission and second return of the dove (the same day at evening) was February 7: 29 days later than the solstice. We cannot doubt then that by this time green leaves might be to be found; leaves of that year's production: and yet it was not so long after the solstice as to render the coincidence nothing extraordinary. Green leaves might be in existence at that time, and of that year's growth, but not necessarily yet in abundance, nor every where, only 29 days after the winter solstice.

The olive indeed is naturally an evergreen; and evergreen trees ordinarily renew their leaves in the summer. To suppose however the formation or reproduction of leaves, in the natural course of things, in the summer of the year of the deluge, when the earth was covered with the waters of the

Nam locorum tanta vis est, ut circa Memphim Ægypti et in Elephantine Thebaïdis nulli arbori decidant (folia), ne vitibus quidem[e].

Prosper Alpinus, who passed three or four years in Egypt, and was a very attentive observer of nature, mentions having regularly noticed a fig-tree there, which was never more than 25 days without leaves in the winter; renewing them annually at the beginning of February[f]. De Medicina Ægyptiorum[g], he observes: Ver Januario atque Februario ibi observari non est mirum, cum ejusce temporis temperamentum mediocre ac temperatum in aëre percipiatur. id ipsumque etiam tempus, veris inquam, indicant arbores, quæ per eos menses ibi germinant, et frondescere incipiunt, terraque illa virentibus herbis stirpibus floribusque amœnissima redditur.

| | | h. | m. | s. | |
|---|---|---|---|---|---|
| * Mean vernal equinox, B. C. 2348, for the meridian of Jerusalem, April | 12 | 3 | 59 | 2·4 | |
| Add three quarters | 273 | 22 | 21 | 37·8 | |
| | 286 | 2 | 20 | 40·2 | |
| Cast off .. | 275 | | | | |
| Mean winter solstice, B. C. 2347 .. January | 11 | 2 | 20 | 40·2 | |
| Equation of the centre .. .. .. | −1 | 21 | 38 | 40 | |
| True winter solstice, .. January | 9 | 4 | 42 | 0·2 | appar. time. |

[e] Plin. H. N. xvi. 33. p. 350. end of the chapter.
[f] De Rebus Ægypt. i. cap. i. p. 7. [g] i. cap. vii. p. 10, 11. *Venet.* 1591.

sea 15 cubits and upwards above the tops of the highest mountains, would be the climax of absurdity. The ancients have remarked too that the olive does not grow commonly in Armenia; only in particular spots or localities of that country*; and this might very possibly be the case: because the olive is naturally fond of warmth, and the climate of Armenia, from the great elevation of the land itself, is bleak and cold. But the sunny and champaigne regions of Mesopotamia and Syria, and the hills and dales of the Holy Land, in both which, as naturalists tell us, the olive is indigenous and flourishes luxuriantly, all lay within a day's distance of Mount Ararat for such a bird as the dove; which is notoriously strong of wing and fleet, and has been known to travel many hundreds of miles in a day. The movements of this bird were actuated and directed by an impulse, not derived from its natural instinct: and the same Providence, which caused it to pluck off this leaf of the olive when it had found it, and to carry it back to the ark, would direct it where to find it too.

Let us conclude then with one more observation suggested by this incident.

The opinion and belief of mankind for some reason or other has connected the olive with peace: the olive branch is almost every where proverbially the symbol of peace.

Hoc pinguem et placitam paci nutritor olivam[o].

But why the olive, it might be demanded, rather than the vine or the fig? each of them a tree as useful to man as the olive, if not more so. Can we desire a better answer to this question, than that which is supplied by the incident which we are considering? What could be more welcome to

* Strabo, in particular, specifies many parts either in Armenia, or in the vicinity of Armenia, where the olive grew. In Armenia, the Ἀραξηνὸν πεδίον[h], or plain through which the Araxes flowed, and the regions called Sacasene, and Gogarene: and in Melitene, a district of Cappadocia, bordering on Armenia[i]. In the vicinity of Armenia, the Sinopetis or region of Sinope on the Pontus[k]: and the parts about Phanaræa[l]: about Side and Aspendus in Pamphylia[m]: Selge in Pisidia: Synnada in Phrygia[n], &c.

h xi. cap. xiv.
i xii. ii. ad prin.
k xii. iii.
l Ibid.
m xii. vii. ad prin.
n Ibid. viii.
o Virgil. Georgica, ii. 425.

the inmates of the ark, than the sight of this green leaf? What more consolatory and more cheering than the hope excited by that spectacle? It was both the pledge and the symbol of peace; of peace between God and his own creation. It announced, more plainly than words could have done, that his anger was over; that his judgments were now at an end; and that his blessing, which had made the earth fruitful at first, and had clothed it with every variety of natural beauty, was again producing the same effect. Doubtless this first green token of the reviviscence of nature, after such a winter as that of the flood, would be long remembered; and peace and the olive-leaf would be associated in the minds of men ever after.

It is a singular coincidence at least, that this whole transaction relating to the dove, to its emissions from the ark, to its returns, and to the evidences brought back with it of the subsidence of the waters of the deluge, is that part of the Scriptural account of the flood which Hellenic tradition, (that is tradition derived through the line of Japheth, and the family of Javan,) appears to have perpetuated longest and most distinctly: only in connection with the flood of Deucalion[p], not with that of Ogyges. In the traditions of Spanish America, as we have seen, the humming bird performs the part which Scripture assigns to the dove; and brings to the Noah of those traditions the branch covered with leaves.

## CHAPTER V.

### SECTION I.—*On the method of instruction in the facts of the Christian history before the time, by type and similitude.*

THE faith of believers at present rests on an historical foundation; on the evidence of prophecy long since fulfilled; and on the long since consummated and still duly attested facts of the personal history of their Lord and Saviour Jesus Christ. In this respect they seem to enjoy a privilege,

[p] Plutarch, De Solertia Animalium, πότερα τῶν ζώων, κ', τ. λ. cap. xiii. Cf. Lucian, De dea Syria.

peculiar to themselves; and withheld from all those who lived before any of these events had yet come to pass. Nor can it be denied that it is a privilege, and a privilege confined to those whose order of being is determined to the latter times; a privilege for which they cannot be too thankful, and which they would never think they sufficiently estimated, were they as sensible of the advantage which they derive from their order of time in this respect, as they are bound to be.

But as the Articles of our church truly affirm; and as the historical summary of the operation and effects of faith, from first to last, contained in the eleventh chapter of the Epistle to the Hebrews, demonstrates; even the fathers did not look for temporary promises. The faith of the patriarchs was built on the same foundation, was inspired and encouraged by the same hope and confidence, as that of believers at present. It may admit of a question then whether the disadvantages, under which they appear to have laboured from their chronological relation to the objects of their hope and expectation, were not compensated by something else; which rendered their actual position with respect to the objects, the evidences, the duties and obligations, of a saving faith, *mutatis mutandis* entirely the same as that of believers at present.

In proportion to the greater degree of exertion required from their faith might be its strength and its liveliness also: and if they had further to look through the long vista of time which lay before them, their spiritual vision might be more quick and penetrating. What instance of faith was ever exhibited superior to that of Abel? if, as we have endeavoured to shew, the discovery of the great mystery of redemption and of the method appointed to undo the effects of the fall was made by that; yet with no other clue to the discovery, than the connection of a positive rite with the promise of the seed of Eve.

The measure of illumination too, expressly vouchsafed to the faithful of former times, it may justly be supposed would be critically adapted to the circumstances of their situation; and to the greater degree of light of which they stood in need. It is certain that they had from the first the assistance of prophecy: and it is a great mistake, though a very

common one, to take it for granted that prophecy was intended only for a future, and not for an immediate, use and purpose. Prophecy is history anticipated: and where infallible reliance may be placed on the source of the prophecy, (as must always have been the case with the source of that prophecy which was known to come from God,) prophetical anticipation of the future amounts to actual and present perception. In this respect prophecy served a most important purpose for the benefit of its own contemporaries; without losing its adaptation to the service of posterity also. What the Christian looks back upon as matter of fact, the patriarch, enlightened by prophecy, looked forward to as matter of fact also; and though *he* could not be brought nearer to the time of such events himself, the *time* of those events was thus by anticipation brought nearer to him,

There was one means however of instructing and directing the faith of the patriarchs, as expressive and as effectual as any, of which only an imperfect idea can be formed at present; because it has long since ceased to exist. It was exclusively adapted to the chronological position of faith in the future before the event; and it was exclusively confined to those, whose faith was thus separated from its proper objects by distance of time. This means was the method of TYPE: the representation of something still future under the likeness or similitude of something even then present and sensible. Sacrifice was the first actual instance of instruction of this kind. The rite, as we have seen, was *positive;* and yet it was a type and a figure from the first; the meaning of which was capable of being divined from the nature of the rite itself; as the discovery of its meaning actually made by Abel must prove. We do not know that that was the effect of any express revelation of its meaning made to him in particular; or that the faith which discovered this meaning was illuminated and directed by the grace of God except in the ordinary way. The method of instruction however in things to come by type and similitude having thus been introduced, and the true evangelical import of the first lesson of that kind, which mankind had to learn, having once been divined; vicarious sacrifice in particular from that time forward must have assumed a new character, and have begun to be con-

templated in a new light. The discovery of its meaning made by Abel, and *attested* and *sealed* by the solemn acceptance of the sacrifice of Abel, would not be lost with Abel. It was no doubt, from that time forward, shared by Adam: it was transmitted to Seth: it was inherited by Noah, and by all the patriarchs who carry on the line of human succession, from the creation to the flood and from the flood to the Exodus.

This symbolical method of instruction in the future facts of the Christian history was carried to its perfection in the Levitical economy; which cannot be more truly or more characteristically described, than as a system of positive rites and institutions; with a real, a material, a present and sensible nature and application, which made them one thing, and a secret or latent meaning, an ulterior reference and tendency, which made them another. Its priesthood and ministry were typical: its ceremonies, its sacrifices, its ablutions, its feasts and observances of every kind, were typical. Type was the life and soul of this system: but type of which Christ was the antitype. Deprive the Levitical economy of its perpetual reference to the Christian; separate the Law from the Gospel and Moses from Jesus Christ, (if such a separation be possible even in idea,) and all becomes a dead and inanimate letter; a system of ænigmas; an inscrutable mystery, which might have a meaning of its own, known to its Author, but which could not be discovered by us. The Levitical dispensation however was comparatively late in the order of time. It carried the method of instruction "in things to come," and "in things appertaining to salvation" too, by type and similitude to its greatest perfection; but it did not bring the method itself into being: and if the faith of believers for any reason required the same sensible means of instruction, for its own edification and for its own confirmation, before the law, as much as after; at all times in short, while the objects of faith were still future; the first question must be, Was there any thing calculated to answer such a purpose for the benefit of faith, before the Exodus and before the law? and if so, what that was?

In answer to this question, we may begin with observing, That to one, who looks back on the facts of the Christian

dispensation as matter of history, but in the true spirit of Christian faith at present; the comfort derived from the retrospect is the conviction established by those facts, regarded as simply historical; that Jesus Christ has appeared in the flesh, and has both done and suffered every thing for the benefit of human salvation, which the necessity of the case required that he should, and which prophecy had long before predicted that he should. There are but two facts in the personal history of Jesus Christ, in which at this distance of time the faith of the Christian believer feels instinctively that it is most directly interested; because in these two all its hopes and all its assurances are summed up; and on these two all depend: and these two are simply his birth and his death; his coming into the world to save mankind, and his continuance in it until that end of his coming was accomplished. In comparison of these two, every thing else, which made part of the personal history even of our Lord himself during his sojourn upon earth, appears to be accidental; or merely instrumental in connecting one of these facts with the other: so that it is not too much to say that, as they present themselves to the retrospect of faith at this distance of time, these two facts are the sum and substance of Christian hope and confidence. It fixes its eye on these two and these two only; the birth of its Saviour at one time, the death of its Saviour at another. It reads the Christian history as inchoate and beginning in the manger of Bethlehem; it reads it as finished and completed on the cross of Calvary, and in the morning of the resurrection.

Let the Christian then, who lives at this distance of time from the actual coming of Jesus Christ, place himself in imagination at any distance of time before that coming, not earlier than the promise to Abraham and the birth of Isaac: and then let him ask himself whether, in this promise to Abraham, and in this birth of Isaac, and in the subsequent facts of the personal history of Isaac, he can discover nothing analogous to all which his faith itself, at this distance of time since the event, has any occasion to contemplate even in the personal history of Jesus Christ? Was there nothing in the birth of Isaac analogous to the birth of Jesus Christ? Was Jesus Christ the promised seed? and was not

Isaac the child of promise too? Was Jesus Christ the only begotten of the Father? and was not Isaac the only son of Abraham also? Were the circumstances of the birth of Jesus Christ miraculous? and was there nothing preternatural in those of the birth of Isaac? Lastly, was Jesus Christ, the only begotten of the Father, given up by the Father to become a sacrifice and an offering for the salvation of men? and was there not such an event in the personal history of Isaac too, as *his* being offered, or intended to be offered, up in sacrifice by Abraham *his* father himself?

In a word, we are clearly of opinion that, in pursuance of this principle of instructing and confirming the faith of believers, before the actual appearance of Jesus Christ, by the method of type and similitude; the positive, standing representation of the future Saviour, such as the faith of the Christian, enlightened by the evidence of the fact, looks back upon at present; after a time, (that is, as soon as the nature of the case admitted of it,) was to be found in the personal history of the patriarch Isaac. To believers of old, who lived later than the call of Abraham and the birth of Isaac; Isaac more particularly was always designed to be the type of Christ. In Isaac, as in a glass, they were to contemplate the image of Christ, made visible and distinct so long before its time. The birth of Isaac to them was the birth of Christ; the circumcision of Isaac was the circumcision of Christ; and above all the sacrifice of Isaac was the sacrifice of Christ.

If this was the case, no one can deny that from the time of the birth of Isaac, and of the consummation of these facts in his personal history, the faith of a believer, who lived later than his time yet long before the actual coming of our Lord himself, must have had as clear and definite an object of its apprehension perpetually, as that of the Christian at the present day. On this principle however it would be only a natural, and even a necessary, expectation *a priori*, that between the circumstances of these events in the personal history of Isaac, especially those of his birth, his circumcision, and his sacrifice, and the corresponding events in the personal history of Jesus Christ, the agreement should be found to be as complete, and the coincidence as absolute, as the

nature of the case would admit of; and to extend to every thing in both, of which such an agreement and coincidence between things, which after all could not be identical, might be possible.

Now there is one circumstance common to all events, the circumstance of *time;* and in this circumstance even distinct events, and separated from each other by the widest possible interval in *other* respects, are still capable of agreeing. This common circumstantial character of all events is not to be restricted to the year in which they happen, or to the absolute instant of duration, at which they happen; for with such a reference as that, no two events, which were not absolutely identical, could possibly be the same. There is a form of this common circumstantial criterion of all events which we mean by *their time*, which is of a recurring or cyclical character; such as the day of the month, and the day of the week, and the season of the year, at which they happen. All events which happen in time must be characterised by distinctions like these: all must have their proper place in the season of the year, in the days of the month, in the feriæ of the hebdomadal cycle: and these are of a nature to be common to very different events, and at very great distances of time asunder one from another.

In the circumstance therefore of time, understood in this sense, an agreement was possible *a priori* even between two such distant things as the birth or the sacrifice of Isaac, and the birth or the sacrifice of Jesus Christ. And if the former were always designed to serve as types or similitudes of the latter, an agreement between them in this respect would be reasonably to be expected *a priori*. The date of the birth of Isaac was capable of being the same in this sense as the date of the birth of Jesus Christ; and the date of the sacrifice of Isaac as the date of the sacrifice of Jesus Christ; though the absolute interval of duration between either of these events and the other might be nearly 2000 years. Whether they were so or not can be determined only by appealing to the matter of fact: and that appeal can be decided only by means of a just system of chronology; both that of the Old Testament and that of the New.

With regard to the latter, we trust we have done enough

in our former works to establish the truth of every thing of this kind, which concerns the personal history of Jesus Christ; more particularly the truth of those two principal facts of his history, his birth in one year on April 5, his Passion in another year on April 5 also; his birth on the feria 7[a], or at the beginning of the feria 1[a], his Passion on the feria 6[a]; his birth B. C. 4 of the vulgar æra, his Passion A. D. 30; and consequently his age, at the time of the latter event, 33 years complete. The question which we have still to consider is Whether the same things can be established of the personal history of Isaac, and of the corresponding facts in that? and to this question, trusting to the Divine blessing and direction, not to our own sagacity, we will proceed.

### SECTION II.—*On the date of the call of Abraham into Canaan; and on the beginning of the* 430 *years in Egypt.*

It might be inferred indeed from the book of Genesis[q], that Abraham received his first call in Ur of Chaldæa, the land of his nativity; but, as every Christian is or should be aware, the fact itself, and in its proper order of time, is historically related only in the speech of the proto-martyr Stephen[r]. It does not appear that more was done at that time than merely to intimate to the patriarch the pleasure of the Deity, that he should migrate from his own home and his own kindred: and the first trial of the faith of Abraham so far might be this, of simple and cheerful obedience to a positive command, requiring the perpetual separation of the closest ties, and the absolute renunciation of the dearest charities, which bind men to one place more than another, and to one part of their species more than others; the reasons of which, for any thing which is known to the contrary, might not have been communicated at the time.

Into the date of this first call we have no occasion for our present purpose to inquire particularly; but we have a strong and decided opinion that it was critically the middle point of the interval between the creation A. M. 1 B. C. 4004, and the birth of Christ A. M. 4001 B. C. 4; that is, it was A. M. 2001 B. C. 2004.

The next event, the migration from Haran or Charræ in

[q] Gen. xii. 1: xi. 31: xv. 7: xx. 13.

[r] Acts vii. 2, 3. Cf. Heb. xi. 8.

Mesopotamia into the land of Canaan, was the consequence of a second manifestation of God to Abraham, and of a second command [s]. And with respect to the date of this, we are not left to conjecture merely. We may affirm with confidence, (as we shall see by and by,) that it was A. M. 2015 B. C. 1990. Nor do we perceive any reason why it may not be supposed that this second call might have been received, and Abraham might be already in Canaan in obedience to it, before the month of April in this very year.

The third appearance of the Deity to Abraham took place when he was now in Canaan, in the plain of Moreh [t]: and as it was accompanied by a second promise, a more specific promise than any which has yet appeared on record [u], a promise to give that land to *his seed*, when as yet he had *no child;* we may conclude that this is the appearance, and this is the promise, more particularly alluded to by St. Stephen [x]; and that the date of this promise is that of the 430 years between the promise to Abraham, and the delivery of the Law after the Exodus, so distinctly specified by St. Paul [y]. It may reasonably be conjectured therefore that its date was the same day this year as that of the birth of our Saviour at last, and that of the birth of Isaac before his; that is, as that of the birth of the promised seed, both the literal one and the typical; viz. April 5. It was followed by the erection of an altar to the Lord; the first which Abraham had yet erected since his coming into Canaan, and possibly even since his migration from Ur of Chaldæa: and April 5 being the *feria quinta* this year, if the altar was erected, and the first sacrifice upon it was offered, the next day, the date of both would be April 6, and the *feria sexta*.

The next event, which we consider it necessary to notice, is the descent of Abraham into Egypt. It was ordained by Providence that the first year of his sojourning in Canaan should be a year of scarcity; and that Abraham should be compelled by that circumstance to go down into Egypt [z]: of which it

[s] Gen. xii. 1–3, 4; Acts vii. 4.

[t] Gen. xii. 6, 7.

[u] Gen. xii. 1–3: xv. 6, 7.

[x] Acts vii. 4.

[y] Galatians iii. 17.

[z] Gen. xii. 10. The providential character of this first famine, so early in the history of the residence of Abraham in Canaan, will clearly appear from Gen. xxiv. 1, the next occasion of the same kind; an hundred years later at least. The final end too of Abraham's going down to Egypt from Canaan, thus early, will not less plainly appear

was the lot at this time, as in after-times, to enjoy plenty and abundance, when the neighbouring countries were suffering from privation and dearth: an immunity due to the Nile, which could not fail to be the case so long as the Nile continued to rise every year as usual.

But what was the final end of this early descent of the patriarch Abraham into Egypt, almost as soon as he had come into Canaan? Doubtless, among other reasons, to lay an historical foundation for the assertion which occurs in Scripture [a], that the sojourning of the children of Irsael in Egypt, prior to the Exodus, from first to last, was one of 430 years. It was so, as measured by the rule of the Divine apprehension, which looks at things in their real connections with and dependencies upon each other; and therefore in this Egyptian sojourn of the father of the whole line of the people of Israel, though still unborn, already contemplated the beginning of theirs: just as in the act of Abraham, when he gave tithes to Melchisedec, it contemplated the submission of Levi himself, still in the loins of Abraham, to a greater priesthood than the Levitical.

It is of importance to this question, to take notice that Abraham must have gone down to Egypt on this occasion, after the failure of the harvest of both kinds in Canaan; and therefore towards the end of the summer. Now this was the time when the family of Jacob too went down thither; and this was also the time when the Holy Family, after the Nativity, went down thither [b]. Such is the harmony of the divine chronology with itself—and such its distinction from that spurious chronology which pseudo-philosophers, pseudo-critics, and pseudo-rationalists, who profess to be wiser than Scripture, would substitute for it. The sojourning of Abraham in Egypt having actually begun about this time, B. C. 1990; from that time to the date of the Exodus, April 10 B. C. 1560, the interval could not be less than 429 years and seven or eight months.

from xxvi. 3; and from the prohibition expressly given to Isaac's going down thither too on this occasion, though for a similar reason.

[a] Gen. xv. 13; Acts vii. 6, 7; Exod. xii. 40, 41.

[b] See our Dissertations, Diss. xii. vol. i. 394 note; xviii. vol. ii. 146, 147; Prolegomena, cap. iv. sectio i. 182–185.

SECTION III.—*On the date of the fifth minifestation, and of the covenant made with Abraham, and of the* 400 *years of servitude.*

The next event which we consider it necessary to notice is the fifth manifestation and the fourth promise [c]; the fourth manifestation and the third promise, which followed immediately after the return from Egypt and the parting of Abraham and Lot [d], being omitted at present. This fifth manifestation is memorable on many accounts. It was the date of the covenant made with Abraham, the covenant of grace or promise, in opposition to one of works [e]; the date of the righteousness imputed to Abraham, as the work or effect of his faith; the first instance in the history of Abraham, when it is distinctly stated, "Abraham believed God," and that this faith or belief was "counted to him for righteousness [f]."

With respect to this date itself; we consider the year to be a certain point, A. M. 2016 B. C. 1989: and as to the time of the year, all the circumstances of the account conspire to fix the transaction recorded to *one* day, which would appear *a priori* to have been of all the most suitable for it; the day of the birth of the promised seed, in the first instance, April 5, and the day of the ratification of the covenant at last, by the sacrifice of that seed, April 5 also.

For, i. It may be collected from the context that the manifestation took place at night, and in the latter part of the night [g]. The first part of the account [h] was transacted in the night, or early in the morning; the remainder between morning and sunset the same day [i]. Now B. C. 1989 Dom. Lett. FE April 5 was the *feria septima,* or sabbath; that is, this feria began at sunset April 4 and ended at sunset April 5. On this principle, the manifestation would take place on the eve of the sabbath; the sacrifice enjoined would take place in the morning, i. e. on the sabbath itself.

ii. It appears that the stars were to be seen at the end of the night of this day [k]; that is, on the morning of April 5: yet that at sunset, or as soon as the sun went down, it was

[c] Gen. xv. 1–21.
[d] Gen. xiii. 14–17; Acts vii. 5.
[e] Gen. xv. 8–21.
[f] Gen. xv. 6. Cf. Rom. iv. 3: Gal. iii. 6.
[g] Gen. xv. 5–12.
[h] Gen. xv. 1–7.
[i] Gen. xv. 7–12.
[k] Gen. xv. 5.

dark[l]. Our lunar calendar shews that the moon was new this year on April 12, and therefore was 24 or 25 days old on April 5: so that there would not be moonlight either at sunset April 4, or early in the morning April 5.

iii. It appears that so much of this vision and of this transaction, as is recorded xv. 12–16, took place critically as the sun was going down; that is, at the end of the *feria septima* and the beginning of the *feria prima*: which we believe to have been as nearly as possible the time of the birth of our Lord Jesus Christ too, in the *feriæ* of the hebdomadal cycle, April 5 B. C. 4. And this part of the vision relates to the promise of the seed in particular: and it is necessary to attend to that reference, in order to understand the true meaning and construction of the 400 years, predicted of the same seed and on this same occasion[m]. These 400 years also bear date from the birth of the seed; that is of Isaac, the type of the seed; and Isaac was not yet born, nor destined to be in less than 23 years to come: and the true interval from his birth to the Exodus was 406 years; from his birth to the beginning of the visitation and judgment of the Egyptians, for their oppression of the children of Israel, was 405 years: but whether 405 or 406, it is both here and in the Acts of the Apostles[n] called 400 years in round numbers.

There are few passages of Holy Writ against which sceptical men, who have not the fear of God before their eyes, nor any reverence for his word, have been so bold and so hardy in expressing their own opinions and belief, as against this: charging the Scripture of truth, (nay even the Author of that Scripture himself, whose words these are which Scripture records,) with falsehood; as if it asserted a 400 years' period of affliction and suffering, which was one at the utmost of not more than 217 or 218. They have not perceived, nor would their prejudices permit them to perceive, that the primary reference in this prediction is to the sojourning of the children of the promise in a land which was not their own as yet, from the birth of Isaac to the Exodus: a prediction literally fulfilled[o]. As to the affliction also predicted, it is parenthetic; as the right arrangement of these texts will shew:

l Gen. xv. 12–17.

m Gen. xv. 12–16; Acts vii. 6, 7.

n vii. 6, 7.

o Cf. Hebrews, xi. 9, 10.

"Know of a surety (i.e. knowing thou shalt know) that a stranger shall thy seed be, in a land not unto them, (a land which is not their own,) *four hundred* years: (and they shall afflict them; and also the nation which they shall serve, am I judging:) and after that (after so) they shall come forth with great abundance[p]." What inconsistency is there in this? Or who shall pretend to assure us that *this* was not the true meaning and intent of the prediction, which is so signally in unison with the event? of which too, the reference to it by St. Stephen, Acts vii. 6, 7, is only the literal version; and therefore is to be similarly understood and interpreted.

It appears to us plain from this passage of Scripture, and from no part of it more so than verse 16, which foretells the return to the land of Canaan in the fourth generation after the descent into Egypt, that nothing could have been so distinctly present to the Divine apprehension in this prediction of the future course of things, as the simple chronological order and succession of the whole. That part of the prediction was literally fulfilled. Four generations did actually measure the interval between the Descent and the Exodus: and yet the number of generations, in another point of view, and as the fact actually held good, was much greater. It made part of the economy of the sojourn in Egypt that the increase of the tribes, effected during it, of all but the tribe of Levi, should be out of proportion to the interval of time within which it was effected: and this is another stumblingblock with sceptical men, and with pseudo rationalists, the *δοξόσοφοι* and the *μωρόσοφοι* of this present world; all those, in short, who, if they seek for occasions of offence in Scripture, will be sure to find them even there. And yet it admits of a very easy explanation; so easy and obvious, that, were they not wilfully blinded by their own prejudices, such sharpsighted and sagacious critics and chronologers, as they believe themselves to be, ought long since to have perceived it. The instrumental means of this increase in so short a time, under the Divine Providence, were early marriages and proportionably short generations: so that it is capable of proof, from genealogies actually on record, that, in the 217 or 218 years between the Descent and the Exodus, the actual number of generations was 15 or 16, and the average length

p Gen. xv. 13, 14.

of each was 14 or 15 years. But of the tribe of Levi in particular, both for other purposes connected with the ultimate destination of that tribe, and for the fulfilment of this prediction, and for the complete attestation of the Divine veracity against all who should be hardy enough to call it in question; the natural interval of a generation, which at this period of human existence must be estimated at 40 years, was still permitted to hold good. The representative of the first generation in the line of Levi, the generation contemporary with the Descent, was Kohath; that of the second was Amram; that of the third was Aaron; that of the fourth was Eleazar: and in the time of Eleazar, then under 20 years of age, no one needs to be told, the Exodus took place: and in that of Phinehas his son, not then 40 years of age, the entrance into Canaan. This prediction therefore, in spite of the cavils and criticisms of the pseudo-rationalist and the pseudo-chronologer, received a perfect fulfilment in all its circumstances.

SECTION IV.—*On the date of the sixth manifestation, and of the fifth promise, and of the institution of the rite of circumcision.*

The next particular in the history of Abraham, which we think it necessary to consider, is one of the most important to the object which we have in view, which has yet been noticed. It is the date of the sixth manifestion, and of the fifth promise[q]: the first occasion on which the birth of Isaac, at a set time, was formally announced: the date of the change of the name of Abraham, from Abram, (a father of height or of excellence,) to Abraham, a father of multitude[r]; and of that of Sarah, from Sarai to Sarah[s]: the date of the institution of the rite of circumcision, as the sign and seal of the covenant, already made with Abraham but not yet ratified or attested by such an outward badge as this[t]: and lastly, the date of the renewal of the promise of the birth of Isaac[u], with this significant circumstance of specification over and above, that it should take place at *that set time* the next year[x]; and the imposition or prescription of the name by which he should be called when born, in anticipation of that event[y].

[q] Gen. xvii. 1—8. [r] xvii. 5. [s] xvii. 15. [t] xvii. 9—14. [u] xvii. 15—21. [x] Gen. xvii. 21. [y] xvii. 19.

It follows that these things must have been said and done at the same time and on the same day *this* year, at which and on which Isaac was actually born the *next*: so that if that day was April 5 B. C. 1966, this must have been April 5 B. C. 1967. Now the Dom. Lett. B. C. 1967 being F, April 5 that year was the *feria sexta*; and the next year it would be the *feria septima*. It follows that the rite of circumcision, instituted this day, and first administered the selfsame day on the patriarch Abraham, on Ishmael his son, and on all the males of his household [z], was both instituted and administered for the first time on April 5 the *feria sexta*. The history of subsequent events shews that the rite of circumcision, similarly administered on the whole of the male population of the children of Israel, after the passage of the Jordan [a], B. C. 1520, began to be administered on the *feria sexta* too.

With respect to the *year* of this manifestation, we remind the reader that Abraham was 75 at the time of his call from Haran [b], and is said to have been 99 at the time of this manifestation [c]: so that the manifestation could not have been more than 24 years after the call from Haran at the utmost. But if Abraham was nearly 75 complete at the time of the call, and only 98 complete at the time of the institution of the rite of circumcision, the actual interval might be only 23 years. The exact day of the birth of Abraham has not been made known to us: but we might very well conjecture, if necessary, that it was so ordered by Providence as to fall out in the spring of the natural year. The years of his age are no doubt to be reckoned in the first instance in the æra cyclica. In this æra the year of his call from Haran was the 2016th; and the 1st of Thoth was then falling Dec. 23 B. C. 1991. If his call took place in March, it might be towards the end of his 75th year; April or May B. C. 1990. In the year of the manifestation, which we are considering, æra cyc. 2039, the primitive Thoth bore date Dec. 17 B. C. 1968: and Abraham's 98th birth day might arrive some day between that and April 5 B. C. 1967: in which case he would be strictly 98 complete, and therefore, in the idiom of Scripture, 99, on April 5, when he underwent the rite of circumcision. The institution of this rite

[z] xvii. 23–27. [a] Joshua v. 1–9. [b] Gen. xii. 4. [c] xvii. 24.

then would be 23 years exactly after the call into Canaan; and that having been 430 years before the Exodus, (B. C. 1560,) viz. B. C. 1990; this must have been 407; consequently B. C. 1967.

SECTION V.—*On the date of the seventh manifestation, and of the destruction of the cities of the plain.*

This sixth manifestation was followed by a seventh the same year [d]: of which Gen. xviii. 10–14, compared with xvii. 19–22, can leave no doubt. It was consequently later than April 5; yet before the conception of Isaac [e]. If so, the extreme limits of the date of this second manifestation are confined between April 5 B. C. 1967, and the beginning of the natural interval, from the conception to the birth, reckoned back from April 5 B. C. 1966 to some day B. C. 1967, whatsoever that may have been: which we endeavoured to shew in the parallel case of the conception and birth of our Lord himself [f], B. C. 5–4, was July 4.

That this manifestation actually did take place between April 5 and July 4 B. C. 1967, may be inferred first from the season of the year at the time; intimated by Abraham's sitting in the door of his tent, in the heat of the day [g]; which describes not merely the noon of any day, but the noon of a *summer's day*; and should be rendered accordingly, not by "in the heat of the day," but "after," or "according to," the heat of the day; that is, as was wont to be done in the east, by those who lived in tents, in the hottest part of a summer's day. Secondly, from the allusion to the calf, "tender and good," fetched from the herd on the same occasion [h]: for that too is an argument of a time in the spring quarter, approaching to summer; the calving season in the east being ordinarily April or May. Thirdly, from the particulars related of the destruction of the cities of the plain, which took place only the next day [i].

The events at Sodom, on the morning of this overthrow, were all transacted between daybreak and sunrise [k]. Lot was dismissed from Sodom when the morning arose: and according to Genesis xix. 23, rightly translated, the sun was just "going forth," that is, just rising, on the earth, when he

[d] Gen. xviii. 1–8. [e] xviii. 9–15. [f] Proleg. cap. ii. 119–124. Cf. cap. iv. 174–176. [g] Gen. xviii. 1. [h] xviii. 7. [i] xviii. 16—xix. 15. [k] Gen. xix. 15–23.

entered into Zoar. So that he entered it precisely at sunrise. And this was the moment of the destruction also; the moment of his entering into Zoar[l]; so that the destruction too took place at sunrise, and so critically at sunrise, that, though Abraham is said to have risen early in the morning and looked toward Sodom, the destruction was even then complete, or in the act of being completed. "The smoke of the country was going up as the smoke of a furnace[m].

To form a correct idea of the time which would be necessary to walk from Sodom to Zoar, the exact distance of Sodom from Zoar ought to be known; but though the site of Zoar is known, that of Sodom is not known. We may assume it conjecturally as not much more than one hour's journey at the utmost. It will follow that the time of the transactions at Sodom, on the morning of its destruction, (all which evidently took place in the morning or after daybreak, yet before sunrise,) must have been that season of the natural year, when for the climate of Judæa the interval between daybreak and sunrise must have been one or two hours at least; consequently the greatest which for that climate is possible; and therefore at or about midsummer. For the sun never rises in Judæa, not even at midsummer, more than a few minutes earlier than 5 A. M.; and the duration of twilight, even at that season of the year, for the climate of Judæa, is not more than two hours and forty minutes *.

The mean vernal equinox, B. C. 1967, was falling April 9; and therefore the true summer solstice July 11 †. And as

* We find from calculation that true sunrise July 1 B. C. 1967 for the latitude of Jerusalem would take place 4h. 57m. 12s. A. M. apparent time; apparent sunrise, about 2 m. 12 sec. earlier: and the beginning of twilight (at a depression of 18° below the horizon) 2 h. 44 m. before true sunrise; i. e. about 2 h. 13 m. A. M.

† B. C. 1967.

| | | | h. | m. | s. | |
|---|---|---|---|---|---|---|
| Mean vernal equinox, at Jerusalem, April | | 9 | 11 | 7 | 4·8 | |
| First quarter | | 91 | 7 | 27 | 12·6 | |
| | | 100 | 18 | 34 | 17·4 | |
| Cast off | | 91 | | | | |
| Mean summer solstice | July | 9 | 18 | 34 | 17·4 | |
| Equation of the centre | + | 1 | 10 | 44 | 53 | |
| True summer solstice | July | 11 | 5 | 19 | 10·4 | apparent time. |

l xix. 21–24. m xix. 27, 28.

we have already concluded that the actual date of the appearance to Abraham could not have been later than July 4, we may very probably conjecture it was the same day this year, before the conception of Isaac, on which the Annunciation took place before the birth of Jesus Christ; that is June 30[n]; which was the *feria prima* this year, as much as B. C. 4. If the date of the manifestation then was June 30, the *feria prima*, at noon; that of the destruction of the cities of the plain was July 1, the *feria secunda*, at sunrise; ten days only before the summer solstice.

### SECTION VI.—*On the date of the birth, and the date of the circumcision of Isaac.*

The *set time* for the birth of Isaac designated in this year having been determined to April 5, the date of his birth itself must have been the same day the next year[o]; that is, April 5 B.C. 1966. This then is the true date of the birth of Isaac. The Dominical Letter being E, April 5 was the *feria septima*. But the same Julian date necessarily coincides, wholly or in part, with a double hebdomadal date reckoned according to the primitive rule; and, if the birth of Isaac happened critically at or about sunset April 5, it would fall out critically, as our Saviour's afterwards did, on the confines of the *feria septima* and of the *feria prima*; yet strictly on the latter rather than on the former.

That Isaac was actually born at the *set time* previously appointed for his birth, we read distinctly[p]; and if the article of his birth was really that of sunset, April 5, the *feria prima ineunte*, then his circumcision too, on the eighth day after[q], like our Saviour's also, would fall clear of the *feria septima* or sabbath, whether its Julian date was April 12 after sunset, or April 13 after midnight. Abraham also, who was 98 complete, 99 current, April 5 B. C. 1967, would necessarily be 99 complete, 100 current, April 5 B. C. 1966, at the time of the birth of Isaac[r].

### SECTION VII.—*On the date of the sacrifice of Isaac.*

In the authorized version of the scriptural account of the

[n] See our Prolegomena, cap. iv. 176: Harmonia Evangelica, pars prima, §. 4.
[o] Gen. xxi. 1, 2–7.
[p] Gen. xxi. 2.
[q] Gen. xxi. 4.
[r] Gen. xxi. 5.

sacrifice of Isaac, he is called a *lad*[s], as if at the time of that transaction he was only of the age which *we* should understand to be meant by such a term: yet the same word in the other three instances, in which also it occurs in the same account applied to Abraham's attendants, is rendered by "young men[t]."

It cannot be denied that this word is applied in the Hebrew to a very tender age, even that of an infant or suckling[u]. It is just as undeniable that it is also applied to a comparatively advanced age. It is repeatedly applied to Rebekah, in the account of the transactions preliminary to her marriage with Isaac[x]; and yet she was grown up at that time. It is applied to Joshua, the servant or minister of Moses, at the time of the Exodus[y]; and yet it is capable of proof that he was 56 years old at that very time at least. The mere use of this term therefore, in a particular instance, proves nothing. It is more ambiguous than the Latin *juvenis;* which continued to be given to persons of the age of 40. There cannot be any doubt that, though Isaac was 33 years old at this very time, this term would nevertheless be strictly applicable to him.

Now, if he was born April 5 B. C. 1966, he would be 33 years old complete April 5 B. C. 1933; just as our Saviour was 33 years old April 5 A. D. 30, having been born April 5 B. C. 4. And as the hebdomadal date of the birth of Isaac B. C. 1966 corresponded to that of the birth of our Saviour B. C. 4; so on this principle would that of the sacrifice of Isaac, B. C. 1933, correspond to that of the Passion, A. D. 30; and both be the *feria sexta.* The Dominical Letters B. C. 1933 were G F; and A. D. 30 the Dominical Letter was F; and, when F is the Dominical Letter, April 5 is the *feria sexta.*

When Abraham received the command to offer his son in sacrifice, he was sojourning either in the land of the Philistines, or at Beersheba[z]: and as he returned to Beersheba, when the sacrifice was over[a], the latter is the more probable supposition. But wheresoever he was previously, it was some-

[s] Gen. xxii. 5–12.
[t] Gen. xxii. 3. 5. 19.
[u] Exod. ii. 2–6; Judges xiii. 5–7; 1 Sam. i. 24.
[x] Gen. xxiv. 14. 16, &c.
[y] Exod. xxxiii. 11.
[z] Gen. xxi. 34.
[a] Gen. xxii. 19.

where three days' journey[b] distant from the destined locality of the sacrifice itself. This place is simply defined in the narrative as one of the mountains in the land of Moriah[c]; to which Abraham himself, when the sacrifice was over, first gave the significant name of Jehovah-jireh[d]; not more in reference to the victim which God had already provided for this occasion, and on that spot[e], than in reference to that still greater but still future victim, which he would one day provide on the same spot.

And this being the case, no conjecture can appear more reasonable than that the locality, designated for the sacrifice of Isaac on this occasion, was the same which was called Calvary in after-time. For though the name of Moriah is certainly given to the Temple mount[f], the locality here prescribed to Abraham is not called mount Moriah, but one of the mountains in the land of Moriah; and this mode of describing it itself must be a demonstrative argument that the land of Moriah contained more than *one* mountain at least; of which, though the Temple mount might be one, mount Calvary might be another.

It is clear at least that the end, proposed by bringing Abraham three days' journey expressly to this locality to perform this service to God, must have been in order that the sacrifice prescribed might take place at Jerusalem; where only, after the settlement of the people of Israel and the construction of the temple itself, sacrifice, in order to be accepted, could be offered; where too and where only, in due course of time, the great sacrifice itself was destined to be accomplished. And as this great sacrifice, though accomplished at Jerusalem in general, was consummated on mount Calvary there in particular; no conjecture, as we have already observed, can possibly appear more natural, or even more necessary, than *this;* that the typical anticipation of this great sacrifice, now certainly transacted on the same locality in general, was critically transacted on the very same spot in particular.

And thus the comparison which we proposed to institute

[b] Gen. xxii. 4. [c] Gen. xxii. 2. [d] Gen. xxii. 8. 14.
[e] Gen. xxii. 13. [f] 2 Chron. iii. 1.

between Isaac and Jesus Christ—from the birth to the sacrifice of each—is at length complete; and either of these things *mutatis mutandis* is seen to have been absolutely the same with the other. With respect therefore to the objects of faith, or the facts on which faith has always had to rest, whether now or in former times; there was scarcely a shadow of difference between the case of the believer in ancient times, and the case of the faithful still. The day of Isaac, in its two principal circumstances, his birth and his typical death, to the faith of times later than his, but earlier than the Christian, was to all intents and purposes what the day of Jesus Christ, in his birth and in his literal death, is to the faith of Christians still. And when our Saviour himself declared to the Jews his own contemporaries, "Your father Abraham rejoiced to see my day—and he saw *it* and was glad[g]"—can we doubt, after what has thus been made to appear of the parallel between the day of Isaac and the day of the Christ himself, in what it was, and through what it was, that he had seen it, and had rejoiced to see it?

## SECTION VIII.—*On the lunar characters of the dates just considered.*

We have said nothing as yet of the lunar characters of these two years B.C. 1966 and B.C. 1933; the former the year of the birth, the latter that of the sacrifice of Isaac: because we do not consider the lunar character of either of these years to be that which in a case of this kind is first and properly to be taken into account. The patriarchs might possess the proper lunar calendar of the primitive year; but the civil calendar, it is evident, was still regulated by the sun, and not yet by the moon. The true reckoning of annual time can be kept perpetually only in the mean natural year; or in the mean Julian constantly equated to the mean natural. And though, at the epoch of the appearance of our Saviour, civil annual time among the Jews had long been regulated by the lunar calendar, and though strict conformity to that reckoning, considered as now the reckoning of the law itself, required that he should be born on the 10th of one lunar month, and should suffer on the 14th of another; yet

g John viii. 56.

we have only to consider what Julian day corresponded to both, viz. April 5, to be satisfied that the true date both of his birth and of his death, really regarded in and through these two lunar dates for it respectively, was this solar or Julian date of April 5.

Our general lunar calendar however will shew that the mean new moon of March, B. C. 1966, would bear date March 29 at 18 h. to March 30 at 18 h.: and the mean new moon of March, B. C. 1933, March 24 at 18 h. to March 25 at 18 h. And calculation will also shew that the true new moon, for the meridian of Jerusalem, in the former instance would bear date March 29 about 17 h., and in the latter March 23, at 15 or 16 hours. Calculation, in like manner, determines the new moon of March, B. C. 4, to March 27 about 6 A. M.: and the new moon of March, A. D. 30, to March 22 about 20 h. from midnight. And though these latter dates are not numerically the same with the former, yet they approximate closely to them; and that is sufficient.

## CHAPTER VI.

### *On the chronology of the life of Moses.*

SECTION I.—*On the correction of the calendar at the Exodus.*

WE have seen reason to conclude that the most likely means of arriving at the knowledge of the truth on this particular subject of inquiry is to trace the history of Moses backwards; i. e. to begin with investigating the date of his death. This is consequently the method which we propose to adopt.

In the ancient calendar of the Jews the fast for the death of Moses was attached to Adar 7: and we are satisfied that many authentic dates in their early history were preserved in this calendar; and through this were consigned to posterity. But with respect to this particular date, we consider its authority entitled to go no further than the month, understood of the xiith of the calendar in the time of Moses; the month which preceded Nisan. It must always have been

inferred from the testimony of Scripture itself, that the death of Moses happened either in this month or in the month before it. The 7th of this month it appears to us was fixed upon as the actual date of that event, under an idea that the 30 days' mourning for the death of Moses expired three days before the passage of the Jordan[h]; the date of which being Nisan 10, the end of the 30 days in question on that principle must have been Nisan 7; and therefore the beginning Adar 7*. But in the time of Josephus[i] the traditionary date of the death of Moses appears to have been Adar 1. This is the date which he himself assigns it: and we shall see by and by it is almost, if not absolutely, the truth.

It is necessary however to premise here, more distinctly than we have ever yet done, that the calendar of the children of Israel up to the date of the Exodus was the same with the Egyptian, and with that of the rest of the world; but that on the eve of the Exodus itself this common calendar of all mankind for their use and observance in particular underwent a change. The date of the Exodus in the æra cyclica was 2446; and that year bore date September 9 at 18 hours according to the primitive rule, September 10 at midnight according to the Julian, A. M. 2444 B.C. 1561. The seventh month of this year, the primitive Phamenoth, consequently bore date March 8 at 18 hours by the primitive rule, March 9 at midnight, A. M. 2444 *exeunte*, B. C. 1560.

In this month, (for reasons on which some light may perhaps be thrown by what we shall have occasion to shew by and by,) it pleased the Deity to correct the calendar; and

* On this principle it is, that we must explain the commentary or gloss of the Targum of Jonathan on Deuteronomy xxxiv. 5: "Septimo die mensis Adar natus est Moses doctor Israëlitarum; et septimo die mensis Adar collectus est e medio mundi." Also on verse 8: "Et fleverunt filii Israel Mosem in campestribus Moab diebus triginta; et impleti sunt dies fletus luctus ipsius Mosis octavo *mensis* Nisan; et nono *ejusdem mensis* Nisan præpararunt &c., et transierunt Jordanem decima *mensis* Nisan; et cessavit illis man decima sexta *mensis* Nisan. inventi sunt edere man propter meritum Mosis cum mortuus esset jam a triginta septem diebus:" (i. e. from Adar 7 exclusive to Nisan 15 inclusive, Adar being reckoned at 29 days.)

h Cf. Deut. xxxiv. 8. Joshua i. 1—11.

i Ant. Jud. iv. viii. 1—49.

to appoint the beginning of a new reckoning of annual civil time, the epoch of which was taken directly from the 19th day of this seventh month; March 26 at 18 hours according to the primitive rule, March 27 at midnight according to the Julian. And thus much would always be discoverable of the nature of the correction now made, and thus much would still be certain of the actual date of the new style, whether the reasons of the change could be discovered or not; viz. that the first day of the first month of the new calendar, prescribed for the use of the Israelites from this time forward, was the 19th day of the seventh month of the old, æra cyclica 2446: corresponding to March 27 according to the Julian rule at midnight, B. C. 1560.

But it is very important to observe that the civil calendar of the people of Israel was not made lunar by this correction. The true date of their lunar calendar was much later than the Exodus; viz. B. C. 1511. The reason of this distinction is one to which chronologers and commentators, so far as we know, have been strangely inattentive; viz. that the lunar calendar was wanted only for the new moons, and for the other solemnities of the Levitical service, which the necessity of the case connected with a calendar of that description: and, though the Levitical service was all arranged and prescribed in the year of the Exodus itself, it was neither intended nor expected to come into regular and stated operation until after the Eisodus; after the conquest of Canaan; after the division of the land; after the settlement of the tribes in their respective inheritances; and after the erection of the tabernacle in the place where it was destined first of all to be permanently established; viz. at Shiloh. The date of the consummation of all these events, and in particular of the last, and consequently the date of the first institution of the lunar calendar ever after peculiar to the people of God, and indissolubly associated with the service of the tabernacle at first, and with that of the temple afterwards, down to the Gospel æra, and down to the destruction of the second temple, and to the entire dissolution of the temple service itself: this date, and (to the best of our judgment and of our belief) the date confirmed by the testimony of that calendar itself, as often as its testimony can be appealed to, was

April 7 at 18 hours according to the primitive rule, or April 8 at midnight according to the Julian; in either case the *feria septima*, or sabbath, B. C. 1511.

It follows that the civil calendar among the Israelites did not cease to be the same in general as before, not even in consequence of this correction. It was cyclical before; and it continued to be cyclical still. It had xii months of 30 days, and five days over, forming an imperfect month by themselves, or reckoned as no part of the months at all, though necessarily as part of the year; like the cyclical year in general. We do not know that its months had any names but those of number and order, any more than those of the cyclical year, saving and excepting the first; to which, over and above the name of the first, derived from its place in the calendar, a proper name also appears to have been given at the time of the correction, taken from its relation to the natural year; a relation which at that time did strictly and properly hold good of it. For this name was Abib [k]; and Abib, as commentators are agreed, denotes the month of "green ears," "spicarum viridantium;" the month in which barley was in the ear and was fast approaching to maturity: the natural site of which month, for the climate of Egypt and of Judæa, as we shall see more clearly by and by, must have been the vernal equinox. And this was so truly the case with the first Abib of this description, the Abib of the Exodus, that, as we have already observed [l], the date of the mean vernal equinox, B. C. 1560, April 6, 1 h. 24 m. 57 sec. 36th. fell on the 11th of this month itself.

This new civil calendar then of the Israelites while it lasted was as liable to fall back on any fixed term either in the natural or in the Julian year, as the primitive civil year itself; and at the same rate too of one day every four days. This term consequently being assumed as March 27 at midnight, (between which and the Thoth of this new calendar, in the year of the Exodus B. C. 1560, there was absolutely no difference,) in forty years' time, that is B. C. 1520, the year of the Eisodus, there would be *ten* days' difference between them. The Thoth of the new calendar would then be anticipating

[k] Exod. xiii. 4: xxiii. 15: xxxiv. 18: Deut. xvi. 1.

[l] Supra Diss. ix. ch. iv. sect. xiv. Art. xii. p. 116.

ten days on its original Julian date, March 27 at midnight: and consequently would be falling March 17 at midnight. The Epagomenæ of the calendar therefore would be falling March 12 at midnight; the first day of the xiith month February 10 at midnight; and the first of the xith Jan. 11 at midnight. Such was the state of the civil calendar of the Israelites at the end of the 40th year of the Exodus, and just at the beginning of the 41st, which was ushered in by the Eisodus itself.

### SECTION II.—*On the date of the death of Moses, and through that, of his birth also.*

Now, on the first day of this eleventh month, (the first of the Sebat of after-times,) the proceedings recorded in the book of Deuteronomy begin[m]: and the Dominical Letter B. C. 1520 being D, January 11 that year must have been the *feria prima.* And this is the first remarkable coincidence brought to light by the true chronology of the æra of the Exodus: viz. that on one of the most solemn and memorable occasions in the whole history of this æra, next to that of the delivery of the law, the recapitulation of the law, and the addition of every thing necessary to render it complete, and the valedictory addresses of Moses himself, the last and most serious of his admonitions, exhortations, and warnings of the people committed to his charge, all began on the first day of the month, and on the first day of the hebdomadal cycle. We are entirely of opinion that the proceedings which thus began on the first of Sebat, January 11, the *feria prima,* B. C. 1520, and took up the whole of the book of Deuteronomy, occupied one cyclical month, or period of 30 days, exactly; and consequently came to an end on Sebat 30 February 9 the *feria secunda.*

It is carefully to be observed that, Deuteronomy xxxi. 2, Moses declares concerning himself, "I *am* an hundred and twenty years old this day;" and Deuteronomy xxxiv. 7, (whosoever was the author of that statement, whether Joshua, which is most probable, or Eleazar,) those who survived his death declare of his age at the time of that event, "And Moses *was* an hundred and twenty years old when he died."

[m] i. 3.

From these two declarations in conjunction we draw the inference that Moses died on the very day before his birthday; at the very end of that day and of his 120th year: because such is the idiom of Holy Writ, that had his 121st birthday actually been arrived when he himself pronounced the former declaration, or had his contemporaries known that he had actually survived it even by a single day, in either of these cases alike his age would have been represented at 121 years.

It follows that the last day of the life of Moses being the 30th of Sebat, February 9, B. C. 1520; his birthday must have been Adar 1, February 9–10. And the first confirmation of this conclusion is its agreement with the date actually assigned to his death by Josephus; the *νουμηνία* or 1st of Adar. It is probable that this was really the traditionary date of the event in the time of Josephus: but if not, and even though Josephus should be supposed to have collected it from Scripture for himself, it must still be admitted that such is the natural inference from the testimony of Scripture; which conducted Josephus to this conclusion, as it has done us.

We must not however imagine that the age of Moses at his death could possibly be referred to the new reckoning of cyclical time, which was so much younger than his birth itself. We have discovered the true birthday of Moses in the new calendar, the calendar in being at the time of his death, viz., Adar 1; and we have discovered the Julian date to which it corresponded in the year of that event, February 9–10, B. C. 1520. The question is, To what date in the old cyclical calendar did February 9–10, B. C. 1520, in the Julian correspond? for that and that only would be the true cyclical date of the birth of Moses. And this question is easily answered by the primitive cyclical calendar itself.

*Calendar of the primitive cyclical year, Æra cyclica* 2486,
A. M. 2484 B. C. 1521—1520.

| Months. | Midnight. | B. C. | Months. | Midnight. | B. C. |
|---|---|---|---|---|---|
| i Thoth | August 31 | 1521 | iv Chœac | Nov. 29 | 1521 |
| ii Phaophi | September 30 | —— | v Tybi | Dec. 29 | —— |
| iii Athyr | October 30 | —— | vi Mecheir | Jan. 28 | 1520 |

| | | |
|---|---|---|
| vi Mecheir | 1. | January 27 at 18 h.,—28 at 18 h. B. C. 1520. |
| ——— | 14. | February 9 at 18 h.,—10 at 18 h. |

The 9th and 10th of the Julian February then B. C. 1520 corresponded to the 14th of the primitive Mecheir æra cyc. 2486: and this must consequently have been the true cyclical date of the birth of Moses from the first.

The death of Moses at the very end of his 120th year having been æra cyclica 2486; his birth in the same style must have been æra cyc. 2366. The next question is with what day did Mecheir 14 coincide, æra cyclica 2366?

*Calendar of the primitive cyclical year, Æra cyclica* 2366, A. M. 2364—2365 B. C. 1641—1640.

| Months | Midnight. | B. C. | Months. | Midnight. | B. C. |
|---|---|---|---|---|---|
| i Thoth | Sept. 29 | 1641 | v Tybi | Jan. 27 | 1640 |
| ii Phaophi | Oct. 29 | —— | vi Mecheir | Feb. 26 | —— |
| iii Athyr | Nov. 28 | —— | vii Phamenoth | March 28 | —— |
| iv Chœac | Dec. 28 | —— | viii Pharmuthi | April 27. | —— |

ix Pachon May 27.

| | | | |
|---|---|---|---|
| vi Mecheir | 1 | Feb. 26 | B. C. 1640 |
| | 14 | March | 10 at 18 hours.<br>11 at 18 hours. |
| ix Pachon | 1 | May 27 | —— |
| | 11 | June 6 | —— |

The 14th of Mecheir then, æra cyclica 2366, coincided with March 10 B. C. 1640, each being reckoned at 18 hours from midnight. It follows that March 10 B. C. 1640 was the true Julian date of the birth of Moses, if he was born between sunset and midnight; March 11, if he was born between midnight and sunset. It is time then to turn to the actual account of his birth; and to see what the circumstances of that appear to have been.

## SECTION III.—*On the lunar character of the birthday of Moses.*

Now we are informed in the book of Exodus[n] that Moses was kept three months after his birth before he was exposed on the river. But what does that prove, it may be demanded? To the apprehension of one who reads the account of his birth in the English version it may possibly seem to prove nothing: but, if we refer to the original, the case is different.

[n] Exodus ii. 1–2: Cf. Acts vii. 20.

The word which is here rendered by "*month*" is of a peculiar kind. Commentators are agreed that it has a meaning of its own, which the version of month merely does not accurately express. It occurs in other passages of Scripture[o], where the context shews it has a special reference to the *moon*, yet not in any point of view, or in any conceivable state of the lunar phasis; but to the moon as necessarily a *visible* object; to the moon as supposed to be illuminated at least, and, what is more, not only illuminated and so rendered visible, but in possession of all its light, and visible to the utmost extent of which it is capable: that is, to the moon at the *full* *.

* The Hebrew language has only two words for *month;* one, *this* of which we are speaking at present, the other *Eedass.* This latter is the most frequent of occurrence in the Old Testament. The instances of its occurrence are too numerous to be particularly specified. Suffice it to say that where the other is not used (and that is comparatively seldom used) this is.

This word Eedass is consequently that which is found to occur regularly in the Book of Genesis, and down to the Exodus; while the calendar was still solar. Gesenius and the other lexicographers derive it from a verb which denotes *to renew* or *to make new.* In the sense of an adjective, it is certainly meant of *fresh* or *recent.* And hence it appears an obvious explanation of it, as applied to the lunar month, that the moon is always changing; always exhibiting some new appearance; and always passing from conjunction to conjunction, that is, from the *new moon* to the *new moon* again. On this principle too the author of the Book of Ecclesiasticus tells us "the month was called after the name of the moon[p];" that is, after the changeable appearance and seemingly variable nature of the moon. No one can deny the truth of this fact in reference to the lunar month. But the idea of changeableness was just as applicable to the cyclical solar month as to the lunar. There was no more stability in the cyclical month than in the lunar. If left to themselves and to their own law perpetually, both must circulate round any fixed point in the natural or in the Julian year; only the lunar at a much greater rate than the cyclical. As this name of *Eedass* then must have been given to the solar month, in the sense of the cyclical, before it was transferred to the lunar; so notwithstanding it would be applicable to that, and might with the utmost propriety be applied to that, even from the first.

It is observable that in the Book of Job, (the oldest book in Scripture in our opinion; older than the Exodus at least, and than any correction of the primitive calendar any where as yet,) the word *Eedass* occurs only

o Joshua x. 12, 13.; 2 Kings xxiii. 5.; Habakkuk iii. 11.; Gen. xxxvii. 9. Deut. iv. 19.: Job xxxi. 26. p xliii. 8.

If such is the case, it is implied by this note of time that the birth of Moses coincided with the full of the moon; and that, if he was concealed three months before he was exposed,

twice[q]; the word *Iree* (so we write and pronounce this term, after Masclef) six times[r]; though, in two of these instances, for the moon more properly than for the month. For the month, in the sense of the solar month, the proper word to be used was *Eedass;* for the month in the sense of lunar, (in which sense *Iree* is used in these instances,) the use of *Iree* in our opinion is an argument that such was at this time the proper designation for menstrual time, measured by the moon not by the sun; and for menstrual time, so designated, which bore date also from the visible appearance of the moon. And this would be a strong argument that the proper measure of calendar lunar time along with primitive solar from the first was known in the time of Job; viz. the Apis cycle: for we shall see we hope hereafter that the lunar reckoning of the Apis cycle, even from the first, bore date from a visible state of the moon.

It is observable also that *Iree imim*, an *Iree* of days, a full month of that peculiar denomination, occurs in Deuteronomy[s] in a very particular case; that of a female, supposed to have been made prisoner in war, after losing her father and mother; supposed at least to have been separated by her captivity for ever from her home and her kindred. She was to be allowed a *month* of days (called here an *Iree imim*) to mourn her bereavement; that is, for the natural indulgence of her grief. But reckoned according to what calendar or to what rule? Her own? which was not that of her present masters and possessors? or theirs? which was not her own? By what calendar then, but the true calendar of menstrual time, in the sense of lunar? the calendar of the heavens; from a certain state of the lunar phasis at the time to the same state again. This seems to be the true meaning and explanation of the *Iree imim* in this peculiar case.

Indeed as far as our own observation extends, we do not hesitate to say that the idiom of Scripture in the use of these two words *Iree* and *Eedass* for lunar time respectively is distinguished by a very great regard to propriety: and that, where the utmost exactness is required in the specification of menstrual in the sense of lunar time, *Iree* is the word purposely employed, and not *Eedass;* and *Iree* always in this sense, of menstrual or lunar time dated from some visible epoch of the lunar month; the phasis, if intended of the beginning of the month, the full, if of the middle.

For example, at the dedication of the temple[t], the feast is called that of the *Iree* of Ethanim; yet Ethanim itself is called the seventh *Eedass* or month[u]. But the feast was that of tabernacles; which always began on the 15th of the month; consequently at the *full* of the moon.

A still more remarkable case of the same kind is the date assigned to the foundation of the temple, "In the month (*Eedass*) Zif—which is the

q xiv. 5: xxi. 21.

r iii. 6: vii. 3: xxv. 5: xxix. 2: xxxi. 26: xxxix. 2.

s xxi. 13.

t 1 Kings viii. 2.

u Cf. 2 Chron. v. 3: vii. 10.

he was kept three lunar months not from conjunction to conjunction but from opposition to opposition.

On referring to our general lunar calendar, Period viii. cycle xiii, *8, B. C. 1641—1640, we shall see that the day of his birth March 10–11 would coincide with a full moon, cyclically reckoned at least. For the new moon of Nisan, B. C. 1641, bearing date April 5 at 18 hours, and the year being intercalary, that of Adar would bear date February 23 at 18 hours B. C. 1640; and the *πανσέληνον*, or calendar full moon of that month, from March 9 at 18 hours to March 10

second month[x]" (*Eedass*); yet in the *Iree* of Zif[y]; and that of its completion, in the *Iree* of Bul[z]—in the eighth *Eedass* or month. It appears from the Book of Chronicles[a] that the foundation was actually laid on the *second* of Zif. On the second day of the lunar month it might be supposed the moon would be visible under any circumstances. But in this year it must certainly have been so; because May 1, B. C. 1011, which answered that year to the 2nd of Zif or Jar[b], was the luna 3ª or 4ª; the calendar at that time already standing in need of a correction. In like manner the first of Bul or Marchesvan, seven years and seven months afterwards, October 7 B. C. 1004, could not fail to be the phasis of Bul too. We do not doubt that both these epochs in the construction of the temple were purposely referred in this manner to the natural lunar month, rather than to the cyclical, for the sake of defining the true epoch of each in lunar time; which is measured and can be measured, according to the appointment of nature itself, only by the moon. But what an idea does this give us of the scrupulous exactness of Scriptural chronology!

A month of days (an *Iree imim*) is mentioned also, as the length of the reign of Shallum[c]; which too we believe to have coincided with a lunar month from phasis to phasis, Marchesvan 1 October 29 B. C. 770. An *Iree* is specified in Zechariah too[d]; but it belongs to the unfulfilled parts of prophecy; and time only can shew whether that also is not intended of a lunar month, similarly reckoned either from the phasis to the phasis or from the full to the full.

In short this term *Iree* in the sense of the lunar month, reckoned from some visible state of the moon to the same again, appears to have been transferred to the lunar month in the Hebrew language from the proper name of the moon itself in that language. *Iree* is the regular Hebrew word for the moon just as Ssimess is for the sun: and in the sense of the moon it occurs 27 times in the Old Testament—in all which the *ο'* render it by *σελήνη*. Now no one needs to be told that the moon as the moon, just as much as the sun, must be a *visible* object.

[x] 1 Kings vi. 1: cf. 2 Chron. iii. 2.
[y] vi. 37.
[z] vi. 38.
[a] 2 Chron. iii. 2.
[b] See our Prolegomena, cap. i. p. 49, 50, and the Kalendarium Sacrum, Anno A. ch. N. 1011.
[c] 2 Kings xv. 13.
[d] xi. 8.

at 18 hours. But as the exact date of this full moon can be known only from calculation, we have endeavoured to calculate it ourselves, according to the method which we have employed for the same kind of calculations in other instances: and the result of this calculation is that, for the meridian of Heliopolis in Egypt, the moon was actually at the full, as we have determined it, March 10 about 5 A. M. mean time. The mean vernal equinox at the same period of time was falling according to our tables *, for the meridian of Heliopolis, April 6, 16 h. 2 m. 1·6 sec. mean time; the true, April 5. 7 h. 36 m. 52·1 sec. apparent time, so that the sun would set about 5 h. 37 m. P. M. on March 10: and if Moses was born only some time between sunset and midnight on this very day, he would be born both on the cyclical Mecheir 14 and at the full of the moon also. It would be another coincidence that, the Dominical Letter of the year being F, March 10, the day of his birth, according to the Julian rule would coincide with the feria prima: according to the primitive with the feria secunda ineunte.

With regard to the probable date of his exposure on the river after this, it might not be considered necessary to calculate the full moon of June, in order to determine that; because whether he was exposed on the day of the third full moon from that of his birth, or the day before or the day after it, it would be equally true, in each of these cases, that he was kept three lunar months, from the full to the full again, before he was exposed. In our opinion he was actually concealed 88 days, and exposed on June 6; probably early in the morning of that day, which would be the feria

| | | | h. | m. | sec. | |
|---|---|---|---|---|---|---|
| * Mean vernal equinox B. C. 1640 at Jerusalem .. .. | April | 6 | 16 | 17 | 45·6 | |
| | | | — | 15 | 44 | |
| At Heliopolis .. .. | April | 6 | 16 | 2 | 1.6 | |
| Equation of the centre .. | — | 1 | 8 | 25 | 9·5 | |
| True vernal equinox .. | April | 5 | 7 | 36 | 52·1 | apparent time. |
| Mean vernal equinox at Heliopolis | April | 6 | 16 | 2 | 1·6 | |
| One quarter .. .. .. | | 91 | 7 | 27 | 12·6 | |
| Mean summer solstice .. | July | 6 | 23 | 29 | 14·2 | |
| Equation of the centre .. | + | 1 | 8 | 27 | 38 | |
| True summer solstice .. | July | 8 | 7 | 56 | 52·2 | apparent time.

quinta; and this was likewise the date of the full moon of June; June 6 about 22 h. from midnight. Its cyclical date was the 11th of the primitive Pachon: and it would thus fall on the first day of the second decad of that month: to which part of the cyclical month it is possible some importance might always be attached among the Egyptians in particular. The motive indeed which brought the daughter of Pharaoh at this critical juncture of circumstances to the river's side is said to have been simply "to wash *herself* in the river[e]," or to bathe: and we may presume that would be early in the morning, but not necessarily on any stated day.

The most observable coincidence however is that the river at this time was *low*: and its edge or brink was overgrown with flags or bulrushes[f]: in the midst of which the ark of Moses had been purposely deposited, in order that it might not float down the stream. The Nile is never so low as in the month which precedes the rise; that is, a month before the solstice[g]: and the solstice this year for the meridian of Heliopolis would fall July 8. So harmoniously do all the circumstances of this memorable event agree together; and to every test of their truth which can be applied to them.

We conclude that the date of the birth of Moses was Mecheir 14 æra cyclica 2366, March 10 A. M. 2364 *exeunte*, B. C. 1640, the *feria secunda ineunte*, and the true date of the full moon of March that year: that of his exposure was probably Pachon 11, June 6, the *feria quinta*, the date of the full moon of June: the date of his death was Mecheir 13 æra cyclica 2486 February 9 A. M. 2484 *exeunte*, B. C. 1520, the *feria secunda*. The date of the beginning of the mourning for his death was Mecheir 14 February 9 at 18 hours, that of the end was Phamenoth 14 March 11 at 18 hours, the first Epagomene of the cyclical calendar of the children of Israel, for the time being; five days before the Thoth of that calendar, March 16–17, and fourteen days before the tenth of that month, March 25–26, the *feria quinta*, the day of the passage of the Jordan.

e Exodus ii. 5–9.

f 3–5.

g Prosper Alpinus, De Medicina Ægypt. i. viii. 12: De Nilo: "Decrescit autem intra ripas Nilus paulatim ac paulatim ad Maium usque mensem, in quo mense ejus aqua paucissima, et fere stagnans, cernitur." Prosper reckons by the old style; though he was in Egypt just about the time of the Gregorian correction: and before that correction the solstice was falling June 11 or 12.

## CHAPTER VII.

### *On the chronology of the Exodus.*

SECTION I.—*On the date of the year before the Exodus.*

THERE are various occasions between the call of Abraham into Canaan and the descent into Egypt which the primitive calendar is competent to illustrate; of which however we have thought it best for the sake of brevity to give no account at present. For the same reason neither do we propose to treat of the chronology of the Exodus at any length. We shall confine ourselves to one or two particulars connected with it.

We must begin with resuming the subject of the chronology of the life of Moses. In the book of Exodus we have an account indeed of those proceedings which terminated in his becoming an exile from Egypt and a sojourner in the land of Midian[h]; but we have no explanation of the motives into which they are to be resolved, or of the object which they had in view. The speech of the proto-martyr Stephen, 1600 years and upwards later, supplies this omission[i]; and gives us reason to understand that Moses meditated even at that time the deliverance of his countrymen. The book of Exodus too tells us merely that Moses at this time was grown up[k]. What it meant by being grown up it does not tell us. The speech of St. Stephen supplies this omission also[l], by informing us that Moses was 40 years old at this time: so that, at this period of human existence, when the standard of life itself was 120 years, to be grown up and to be 40 years of age were the same thing: that is, 40 years at this time was the proper measure of a generation.

There is a peculiarity however in the words of St. Stephen in this instance which it is very necessary to observe, if we would fully appreciate the strict propriety of his language. His words are *ὡς δὲ ἐπληροῦτο αὐτῷ τεσσαρακονταέτης χρόνος*[m], not *ὡς δὲ ἐπληρώθη*. Moses was not 40 complete; only in the process of becoming so: that is, he was merely 39 complete.

h ii. 11–22.
i Acts vii. 23–29; cf. Heb. xi. 24–27.
k ii. 11.
l Acts vii. 23.
m Ibid.

This incident in his life therefore was later than Mecheir 14 æra cyclica 2405, but before Mecheir 14 æra cyclica 2406; that is, after March 1 B. C. 1601, before March 1 B.C. 1600.

The date of his flight from Egypt therefore being B. C. 1601, and the year of the proceedings which preceded the Exodus being B. C. 1561; it is manifest they were just 40 years complete asunder: and attention is due to this coincidence also. For St. Stephen defines the beginning of these proceedings as 40 years complete after the arrival of Moses in Midian, or after his escape from Egypt; *καὶ πληρωθέντων ἐτῶν τεσσαράκοντα*[n]: which the book of Exodus itself designates simply by "In process of time[o]." The date of the flight, or of the arrival in Midian, being the spring quarter of B. C. 1601, the date of the beginning of these proceedings must have been the spring quarter of B. C. 1561. Nor can there be any doubt that this was truly the case: and that those proceedings, which first began at Horeb with the designation of Moses to his commission, and ended in the Exodus at last, did begin in the spring quarter of B. C. 1561. Yet for the precision, which is thus given to the chronological limits of this memorable year, we are indebted in a great measure to the light which the Spirit of truth was pleased to reflect upon them so long after, through the mouth of the blessed proto-martyr St. Stephen.

No one can pretend to maintain that this light was superfluous; or that it is not calculated greatly to facilitate the task of arranging the chronology of the events of the Exodus. Let us observe its use with respect to the chronology of the life of Moses. It might have been collected from the book of Exodus[p] that Moses was 80 years old in some sense or other when he first stood before Pharaoh in this execution of his commission: but who could have certainly inferred from that statement only that he was in reality merely 79 complete? But if he was only 39 complete in the spring of B. C. 1601, he could be only 79 complete in that of B. C. 1561. And this was actually the case. Moses became 79 complete Mecheir 14 æra cyclica 2445; that is February 21 B. C. 1561. And he first appeared before Pharaoh on this occasion, as we shall see presently, four or five months afterwards.

[n] Acts vii. 30. [o] ii. 23. [p] vii. 7.

SECTION II.—*On the absolute interval of time embraced by the events in Egypt before the Exodus.*

When we read in the book of Exodus, immediately after the first audience of Moses and Aaron of the king of Egypt; "So the people were scattered abroad throughout all the land of Egypt, to gather stubble instead of straw[q]:" it is impossible not to infer from that observation, incidental as it is, that this first audience must have taken place, and consequently the whole train and succession of subsequent proceedings must have begun, some time after the close of corn-harvest in Egypt at least.

It is the custom in Egypt at present[r], (and it seems to have been always so howsoever far back,) to reap the harvest by cutting off the ears close to the top of the stalk, leaving the straw in the ground. The ear is generally well fed, full, and luxuriant; but the stalk is short, and of very little use except as fodder for cattle, or to be collected and chopt up for any such purpose as being mixed with clay and made into bricks. And this latter mode of securing the harvest appears to have been the more ancient one. Corn-harvest we say then must have been over; if nothing was now left upon the ground, all over the land of Egypt, but stubble.

But when is corn harvest over in Egypt? Barley harvest is commonly over at or soon after the vernal equinox; and wheat harvest not more than a month later. Both harvests are over in less than six weeks after the vernal equinox: and as the vernal equinox, B. C. 1561, fell on April 4*; corn har-

* B. C. 1561, Mean vernal equinox,

| | | | h. | m. | sec. | |
|---|---|---|---|---|---|---|
| at Jerusalem .. .. .. | April | 5 | 19 | 36 | 7·2 | |
| | | | — | 15 | 44 | |
| At Heliopolis .. .. | April | 5 | 19 | 20 | 23·2 | |
| Equation of the centre .. | — | 1 | 9 | 1 | 31·2 | |
| True vernal equinox .. | April | 4 | 10 | 18 | 52·0 | apparent time. |
| Mean vernal equinox .. | April | 5 | 19 | 20 | 23·2 | |
| One quarter .. .. .. | + | 91 | 7 | 27 | 12·6 | |
| Mean summer solstice .. | July | 6 | 2 | 47 | 35·8 | |
| Equation of the centre .. | + | 1 | 7 | 51 | 28·5 | |
| True summer solstice .. | July | 7 | 10 | 39 | 4·3 | apparent time. |

q v. 12.

r Wilkinson, Manners and Customs, second series, i. xi. 85–88. Cf. our own Exposition of the Parables, ii. 85.

vest of both kinds must have been over by the middle of May. To judge therefore from this criterion, the beginning of these proceedings preliminary to the Exodus, the first consequence of which was the necessity thus laid on the children of Israel of searching for stubble throughout the land of Egypt to answer the purpose of straw, could not have been earlier than the first or second week in May.

But it is also to be considered that this search after straw is represented as beginning and carried on all over the land of Egypt. Now the Nile rises in Egypt every year at a stated time; and every year at a stated time attains to a certain altitude; after which it is let out and overflows in all directions: and when that is the case, there is no such thing as searching for stubble or for any thing else on the surface of the ground; for the whole of the country is laid under water many feet deep; and nothing is to be seen except the cities, which are purposely raised on embankments, and which Herodotus compares under such circumstances to the islands in the Ægean sea[s].

This stated time of the rising of the Nile is the summer solstice; as we hope to have an opportunity of shewing more at large on a future occasion: and this stated time of overflowing the country is about 40 days later. The true date of the summer solstice, B. C. 1561, may be assumed as July 7: consequently that of the inundation, about August 16. So that if, to judge from one of these criterions, the proceedings preliminary to the Exodus could not have begun before the beginning of May, so, to judge from the other, neither could they have begun later than the middle of August.

Again, when we read in the account of the seventh plague [t], "And the flax and the barley were smitten; for the barley *was* in the ear and the flax *was* bolled: but the wheat and the rye *were* not smitten, for they *were* not grown up:" the question which naturally suggests itself is this, When is the barley in the ear in Egypt? and when is the flax in that state which is meant by being bolled? that is, rising up in

[s] ii. 97. Cf. Diodorus, i. 36. Strabo, xvii. i. Seneca, Nat. Quæst. iv. ii. 10, 11. Ælian, De Anim. x. 43. Achilles Tatius, De Leucippes et Clitophontis Amoribus, iv. 12. Himerius, Oratio xiv. § 8, 9. p. 618. (Wernsdorfii, Gottingæ, 1790.)

[t] ix. 31, 32.

a round and protuberant stem. The barley is ripe at the vernal equinox; the flax even earlier. But it is not intended here to be implied that the barley was now ripe, or that the flax was already in a state fit to be gathered; only that the former had already shot up into the ear, and the latter had already begun to form a boll or head. Now this it is well known is a stage in the process of arriving at maturity, which in the case of barley or wheat precedes the ripeness of the ear for the harvest six or seven weeks at least. It is very observable that at this very time, when the barley was thus in the ear, the wheat was still not grown up. In the original Hebrew this is expressed by its being *dark;* and that is properly invisible or not yet to be seen: from which our translators seem to have inferred that it was not yet grown up. It did not occur to them to reflect that probably for no climate in the world, much less for that of Egypt, could the barley be already in the ear and the wheat not yet above ground. We apprehend the meaning of the distinction to be that, though the barley was already in the ear, the wheat and the rye were still far from that state: and if the latter are ripe only five or six weeks after the former, they must be five or six weeks later in shooting into the ear also.

Again, with regard to the flax; we read in the book of Joshua [y], that at the time of the mission of the spies to Jericho, March 22, as we apprehend, B. C. 1520, 14 days before the mean vernal equinox April 5, the flax was not only ripe but already gathered; and the people of Jericho were even then curing it, i. e. preparing it for its natural use and application, by drying it on the roofs of their houses in the rays of the sun. If this was the case at Jericho, it could not be otherwise with the valley of the Nile in Egypt; which is even more forward than Jericho itself*.

* The Scholia on Aratus, ascribed to Theo, were the work of an Egyptian Greek, probably of an Alexandrine. In these the season of barley harvest in Egypt is defined by the following natural criterion [z].

*Αἱ γὰρ Πλειάδες ἐπὶ τὴν τοῦ Ταύρου εἰσὶ τομὴν, αἵτινες (τῷ Κριῷ) ἐπιτέλλονται ὅτε ὁ ἥλιος ἐν τῷ Κριῷ* (lege *Ταύρῳ*) *ἐστὶ κατὰ τὴν τοῦ θέρους ἀρχὴν ὅτε πρῶτον τὰς κριθὰς θερίζουσιν—Ἦρι οὖν τὸν ὄρθρον, ἤγουν τὴν ἀνατολήν,*

y ii. 6. z Ad Phænomena, 137.

The flax then being already ripe and fit to be gathered a fortnight and more before the equinox, it must have begun to

φησιν· ὑπὸ τὸν ὄρθρον γὰρ ἀνατέλλουσι σὺν ἡλίῳ ὄντι ἐν τῷ Ταύρῳ· ἀπὸ ε′ καὶ εἰκάδος τοῦ Φαρμουθὶ μηνὸς, ὅς ἐστι παρὰ Ῥωμαίοις Ἀπρίλλιος, ὅτε καὶ τοῦ θερίζειν ὁ καιρὸς παρ' Αἰγυπτίοις[a]. The month Pharmuthi in the Alexandrine calendar always began on March 27; and the 25th of Pharmuthi was always April 20. This then was the time, according to this Scholiast, when the barley began to be reaped in Egypt; that is, for *his* time, about one month after the vernal equinox. We apprehend however that this statement is to be understood with some qualification; and that the barley was commonly ripe in Egypt towards the end of March, or the beginning of April, and the wheat about the 20th of April, more probably than the barley; at least in the time of this Scholiast. Pliny tells us the barley was ripe in April even at New Carthage in Spain[b]: and it could not be forwarder there than in Egypt. According to Diodorus Siculus[c], reaping time in Egypt was only four or five months after sowing time; and sowing time being understood of November, the barley, on this principle, would be ripe in March or April, the wheat in April or May. Such is the actual testimony of Pliny, speaking of Egypt[d]: Nilus ibi coloni vice fungens evagari incipit, ut diximus, solstitio. . . . vulgo credebatur ab ejus discessu serere solitos, mox sues impellere, vestigiis semina deprimentes in madido solo: et credo antiquitus factitatum. nunc quoque non multo graviora opera: sed tamen inarari certum est abjecta prius semina in limo digressi amnis, hoc est Novembri mense incipiente: postea pauci runcant, quod botanismon vocant: reliqua pars non nisi cum falce arva visit paullo ante kalendas Aprilis. peragitur autem messis Maio, stipula numquam cubitali, quippe sabulum subest, granumque limo tantum continetur.

Theophrastus, on these subjects in general, observes[e]: Διαφέρει δὲ καὶ πρὸς τὴν τελείωσιν χώρα τε χώρας καὶ ἀὴρ ἀέρος· ἐν ἐλάττοσι γὰρ ἔνιαι δοκοῦσιν ἐκφέρειν, ὥσπερ ἄλλαι τε καὶ μάλιστα ἐπιδήλως Αἴγυπτος· ἐκεῖ γὰρ κριθαὶ μὲν ἐν ἑξαμήνῳ πυροὶ δὲ ἐν τῷ ἑβδόμῳ . . . . οὐ μὴν οὐδὲ ἐκεῖ (that is, in Egypt) τό γε πᾶν πλῆθος οὕτως ἀλλ' ὅσον εἰς ἀπαρχήν· κομίζεται γὰρ πρὸς ἱερῶν τινῶν χρείαν ἄλφιτα νέα τῷ ἕκτῳ μηνὶ, καὶ ταῦτα ἐκ τῶν ἄνω τόπων ὑπὲρ Μέμφιν[f]. This would make barley harvest in Egypt, as a general rule, never earlier than the sixth or seventh month after seed time; that is, April or May. But we may very well question whether on this point Theophrastus was rightly informed. He tells us himself the harvest was a month earlier in Egypt than in any part of Greece: ὥσπερ ἐν Αἰγύπτῳ φασὶ μηνὶ πρότερον ἢ ἐν τῇ Ἑλλάδι[g]: and again, that the harvest was much forwarder in Salamis than in Attica[h]; yet in Attica itself barley harvest,

[a] Ad 264, 265.
[b] H. N. xviii. 18. p. 77, 78.
[c] i. 36. [d] H. N. xviii. 47.
[e] Hist. Pl. viii. cap. ii. § 7.
[f] Cf. De Caussis, iv. cap. xi. Also Pliny H. N. xviii. 10. § 6. p. 58.
[g] De Caussis, iv. cap. xi. § 8.
[h] Hist. Pl. viii. 3.

be bolled considerably more than that time before the equinox. And the barley in like manner being ripe at the equinox,

it is well known, was ready early in May. On this principle, it could not be later in Egypt than the end of March or the beginning of April.

The climate of Phœnicia and that of Egypt could not have differed materially; the advantage in point of forwardness however being rather on the side of the latter. Now for the climate of Phœnicia, the signal of the arrival of harvest time (barley harvest, no doubt, in the first instance) was the appearance of the cuckoo.

> Αἰγύπτου δ' αὖ καὶ Φοινίκης πάσης κόκκυξ βασιλεὺς ἦν·
> χὠπόθ' ὁ κόκκυξ εἴποι κόκκυ, τότε γ' οἱ Φοίνικες ἅπαντες
> τοὺς πυροὺς ἂν καὶ τὰς κριθὰς ἐν τοῖς πεδίοις ἐθέριζον[i].

On which the scholiast observes: Πρὸ θερισμοῦ δὲ φαίνεται ὁ κόκκυξ ἐν τῇ Φοινίκῃ. We cannot suppose the cuckoo was later in appearing in Phœnicia than in Greece: yet in Greece according to Aristotle it appeared ἀπὸ τοῦ ἔαρος ἀρξάμενος: and continued to be seen till the end of July: Ὁ δὲ κόκκυξ φαίνεται ἐπ' ὀλίγον χρόνον τοῦ θέρους τὸν δὲ χειμῶνα ἀφανίζεται[k].—Ἀφανίζεται δὲ ὑπὸ κύνα, φανερὸς δὲ γίνεται ἀπὸ τοῦ ἔαρος ἀρξάμενος μέχρι κυνὸς ἐπιτολῆς[l].—Καὶ ὁρᾶται δὲ μίαν ὥραν τοῦ ἔτους τὴν ἀρίστην ὁ κόκκυξ, ἦρος γὰρ ὑπαρχομένου καὶ αὐτὸς ἐμφανής ἐστιν εἰς ἀνατολὰς Σειρίου· εἶτα τῆς τῶν πολλῶν ὄψεως ἀνεχώρησε[m].

With respect to the process of vegetation from the first sprouting of the seed to its maturity, and its various steps, Theophrastus observes[n]: Τὸν μὲν οὖν χειμῶνα ἐν τῇ χλόῃ μένει τὰ σιτώδη. διαγελώσης δὲ τῆς ὥρας καυλὸν ἀφίησιν ἐκ τοῦ μέσου, καὶ γονατοῦται .... συμβαίνει δ' εὐθὺς ἐν τῷ τρίτῳ γόνατι τοῖς δὲ ἐν τετάρτῳ καὶ τὸν στάχυν ἔχειν .. ἀποχυθεὶς δὲ εὐθὺς ἀνθεῖ μεθ' ἡμέρας τέτταρας ἢ πέντε καὶ πυρὸς καὶ κριθή, καὶ ἀνθεῖ σχεδὸν τὰς ἴσας. οἱ δὲ τὰς πλείστας λέγοντες ἐν ταῖς ἑπτά φασιν ἀπανθεῖν .... μετὰ δὲ τὴν ἀπάνθησιν ἁδρύνονται καὶ τελειοῦνται πυρὸς καὶ κριθὴ τεσσαρακονταία μάλιστα[o]: which makes the whole interval, from the commencement of the process of flowering to the maturity, 47 days at the utmost: from the first appearance, or first shooting up of the ear, to the same, 51 or 52 days at most. Pliny estimates the interval from the end of the flowering to the ripeness of the grain, in the case of wheat generally, at 40 days; no doubt after Theophrastus, whose statements indeed he is repeating[p]: yet he adds[p], Varro quater novenis diebus fruges absolvi tradit et mense nono meti. Varro's own account of the process is this[q]: Quarto intervallo intra solstitium et caniculam plerique messem faciunt, quod frumentum dicant quindecim diebus esse in vaginis, quindecim florere, quindecim exarescere cum sit maturum. Columella's is this[r]: Omne autem frumentum et

i Aves 504: cf. also ad 507, and the Scholia.

k De Animalibus, vi. 7. Opp. i. 563. 19.

l ix. 49. i. 633. 12: cf. Pliny H. N. x. 11. p. 30, 31: xviii. 66. § 2. p. 217.

m Ælian, De Natura Animalium, iii. 30.

n H. Pl. viii. cap. 2. § 4.

o Cf. Pliny, H. N. xviii. 10. 6.

p H. N. xviii. 10. § 4.

q De Re Rustica, lib. i. cap. xxxii. § 1.

r De Re Rustica, lib. ii. cap. xii. § 10.

it must shoot up into the ear six or seven weeks at least before the equinox. These natural criteria therefore conspire

hordeum, quicquid denique duplici semine est, spicam a tertio ad quartum nodum emittit, et cum totam edidit, octo diebus deflorescit, ac deinde grandescit diebus quadraginta quibus post florem ad maturitatem devenit. Palladius' is to the same effect also [s], 48 days from the beginning of the florification to the maturity—both in wheat and in barley.

With regard to flax in particular; it is needless to observe that Egypt from time immemorial was remarkable for that vegetable production, and for the linens manufactured from it. Pliny observes of the flax of Egypt in his time [t]: Ægyptio lino minimum firmitatis, plurimum lucri: quatuor ibi genera: Taniticum, ac Pelusiacum, Buticum, Tentyriticum, cum regionum nominibus in quibus nascuntur. Again [u]: Apud nos, maturitas ejus duobus argumentis intelligitur, intumescente semine (being *bolled*) aut calore flavescente. tum evulsum et in fasciculos manuales colligatum siccatur in sole, pendens conversis superne radicibus uno die, mox quinque aliis in contrarium inter se versis fascium cacuminibus, ut semen in medium cadat. In Italy, the flax was not considered ready before the heliacal rising of the Pleiads, the first or second week in May; but that is no criterion for the climate of Egypt.

Idcirco et primas linorum tangere messes
Ante vetant quam maturis accenderit annum
Ignibus et claro Pleias se prompserit ortu [x].

Sunt enim, observes Columella [y], regionum propria munera, sicut Ægypti et Africæ; quibus agricola post sementem ante messem segetem non attingit; quoniam cœli conditio et terræ bonitas ea est, ut vix ulla herba exeat nisi ex semente jacto, sive quia rari sunt imbres, seu quia qualitas humi sic se cultoribus præbet.—Prosper Alpinus [z]: Ab aqua fluminis aucta fere Ægypti planities, utrinque ad flumen posita, usque ad mensem Novembrem exundata ac veluti obruta jacet. hocque mense solummodo aqua ex toto absorpta terra conspici solet .. qua ex toto absorpta plerumque in multis locis, nulla ejusce terræ, quæ veluti limus apparet, præmissa cultura, agricolæ triticum, linum, trifolium, atque legumina serunt. .... segetes vero omnes usque adeo cito crescunt atque ad maturitatem perveniunt, ut ad finem mensis Novembris seges adeo aucta esse videatur, quod linum ubique flores produxerit .... triticum vero perpetuo ad Nativitatem Domini ex toto spicas profert, quod initio mensis Martii maturum colligitur.—Autumnus (in Ægypto) Septembri Octobrique mensibus celebratur; in cujus fine cessante fluminis inundatione triticum serunt. quod Martio mense maturum ab ipsis evellitur atque colligitur [a]. The spring months in Egypt are reckoned to be January and February; and in these the trees come into leaf, and the ground is covered with ver-

[s] De Re Rustica, vi. tit. i. § 1.
[t] H. N. xix. 2. § 3.
[u] Ib. cap. 3.
[x] Gratii Falisci Cynegeticωn 58.
[y] De Re Rustica, lib. ii. cap. xii. § 3.
[z] Res Ægypti, i. cap. i. p. 6.
[a] De Medicina Ægyptiorum, i. cap. vii. p. 11.

with each other to determine the date of the seventh plague; not later than six or seven weeks before the equinox, B. C. 1560. Those which we have already considered concur in like manner to determine the date of the first plague to some time between the beginning of May and the middle of August, B. C. 1561.

It must be evident therefore from this mode of reasoning, the nature of which is such as to be level to the simplest understanding; that those chronologers have been greatly mistaken who have attempted to reduce the events of this memorable period, occupied by the execution of the commission of Moses and Aaron in Egypt, within the compass of one or of two months: and consequently have crowded all the ten plagues of Egypt, which mark and define the several stages of the period, into these one or two months. It is clear from what we have just pointed out, that they could not have occupied less than nine months, or three fourths of an entire year; that they must have begun about midsummer B. C. 1561, and must have ended at the equinox

dure[b]. Prosper Alpinus however reckons by the old style[c]: and it is clear that under the name of triticum he must include hordeum or barley also—as that which was properly first ripe, and about the equinox.

Schem Seddin, an Arabian writer of Egypt, whose work is described in the "Notices et Extraits" from the MSS. in the Royal Library at Paris[d], and which appears to have been written about Hej'ra 1055 A. D. 1645–46, speaks of flax[e] as gathered in Egypt in the Coptic month which answered to the Alexandrine Phamenoth, Feb. 25—March 27; and of the harvest of both kinds, both barley and wheat, as attached to Pachon, (April 26—May 26,) and to the first half of that month[f].

According to sir Gardiner Wilkinson[g], flax is sown at present about the middle of November, and pluckt in 110 days: wheat is sown in November, and reaped at the beginning of April, a month later than barley[h]: barley is sown in November, and reaped in 90 days, or in the fourth month. In Hamilton's Ægyptiaca too[i] the same statements occur, that barley sown in November is cut in March, wheat, sown at the end of October, is cut at the end of March, or the beginning of April; and flax, sown immediately on the subsidence of the waters, is pluckt up early in March. From all these modern statements we think it must be inferred that harvest of each kind in Egypt is forwarder at present than it formerly was.

b Ibid. p. 10 ad principium.
c Res Ægypti, i. cap. ii. 9.
d Tome i. 165–280.
e p. 260.
f p. 261.
g Manners and Customs, second series, i. xi. 54, 55.
h Ibid. i. xi. 53: 85: cf. 58.
i Part i. note G to p. 271: p. 418 sqq.

B.C. 1560. And as there were ten plagues in all, and the time which they must have occupied could not have been less than nine months; we might almost conjecture from this coincidence that there was one plague every month. It is clear at least that they could not have followed one after another with little or no intermission; stroke upon stroke, and infliction upon infliction, one more severe than another the oftener they were repeated. In the most extraordinary of the visitations and judgments of God, he still remembers mercy; and his first object is to reclaim, not to destroy. He gave the Egyptians time and opportunity for reflection and repentance, by thus interposing an interval between successive plagues; a respite, a breathing space, long enough to allow them to consider, had they been so inclined, in what kind of contest they found themselves engaged against Omnipotence itself. And though it was necessarily to be expected that, the more obstinate they continued, the more severely they would be dealt with in the end; it is equally certain that no plague was inflicted upon them without timely notification and warning; and that the worst and most fatal of all was the last.

It is not our intention however, as we have already declared, to enter at any length on the chronology of this year. We will observe only that we collect from Exodus vii. 25, especially in the Hebrew, that the duration of the first plague, which exclusively affected the Nile, and the rest of the waters of Egypt, was exactly one week of days; though a week or a period of seven days merely does not necessarily imply that it must have begun on the feria prima: or that the seven days in question were strictly one hebdomadal cycle. For reasons which we do not consider it necessary to explain in detail at present, we incline to the opinion that the true date of the plague of blood was July 15. The Dominical Letters B.C. 1561 being G F, July 15 according to the Julian rule was the feria secunda reckoned from midnight. The date of the Exodus at last was certainly April 10, at midnight or soon after. The duration of proceedings preliminary to it, reckoned from the beginning of the first plague, was consequently the interval comprehended between July 15 B.C. 1561, and April 10 B.C. 1560; that is,

269 days: as nearly as possible nine months of 30 days each, and inclusive of both the extreme dates actually so.

### Section III.—*On the date of the first Mosaic or legal Sabbath.*

The people arrived in the wilderness of Sin on the fifteenth of the second month after the Exodus [k]. On the evening of this month, (the 16th dated from sunset,) the first miraculous supply of quails took place; and the next morning, (the morning of this 16th,) at or before sunrise, the beginning of the dispensation of manna.

The manna, having begun to be given on the morning of the 16th of this month, continued to be given from the 16th inclusive to the 21st inclusive, six mornings in all. But on the morning of the 22nd, the morning of the seventh day since it began to be given, it was found to have ceased to be given; and the reason assigned for its cessation on that seventh morning in particular appears from the context before and after; viz. that this seventh day was the *Rest* of the *Holy Sabbath*. No manna was to be gathered on that morning, and therefore none was to be found supplied for gathering; agreeably to what had been notified on the 15th of the month itself, when the dispensation was first promised; that it would be supplied for six mornings, including the next, without intermission; but on the seventh it would not: and therefore that a double quantity would be expressly supplied on the sixth, and a double rate was to be expressly gathered on the sixth, to serve both for that and the seventh [l].

There can be no question therefore that the 15th of the second month of the new calendar must have been the feria 7ª; though not yet expressly designated as the Sabbath; and that the 22nd of the same was not only the feria septima but the sabbath also, in the strictest sense of the term. The tradition of the Jews, as it may be collected from the Jerusalem Targum and from Maimonides [m], dated the first institution of the Levitical Sabbath with the arrival at Marah [n]; where it is said the people were proved by a

k Exodus xvi. 1.

l Exodus xvi. 1. cf. 4, 5, 6, 7, 8, 12, 13: 13–22: 22–26: 27: 29, 30.

m More Nevochim, pars iii. cap. 32. pag. 436. (Buxtorfii, 1629.)

n Exodus xv. 23–26. Numb. xxxiii. 8.

statute and an ordinance made for them: which both the paraphrast Jonathan and Maimonides interpret of the Sabbath. It is plain however from the context[o], that the *rest* of the Sabbath could not yet have been formally enjoined when the people arrived in the wilderness of Sin[p], as they did on the 15th of the second month; though that was the feria septima itself, and therefore, if the Sabbath had been already in force, sabbatic, and a day of resting not of marching. The first notification of such an observance as this of the Sabbath took place on the evening of this very day; the eve of the feria prima: and that must have amounted to a formal institution of the sabbatic rest, if any thing could have done so.

The date then of the institution was the 16th of the second month, the feria prima reckoned by the primitive rule from sunset. The first Sabbath so observed was the seventh day after, the 22nd of the same month, the feria septima reckoned from sunset also. And of the command for the observance thus given beforehand on the 16th, and repeated on the morning of the first Sabbath itself, the morning of the 22nd, it is most reasonable to understand the caution which ushers in the fourth commandment of the Decalogue itself: "Remember." For this fourth commandment relating to the Sabbath was no new commandment even there, but the repetition of a commandment already given; of which the people might be reminded under any circumstances, and, if they had already shewn a disposition to forget it, or a reluctance to observe it[q], would require to be reminded. The same observance is again referred to in Deuteronomy[r]; as something which had been more than once enjoined.

Now if both the 15th and the 22nd of the second month of the new calendar were the seventh day of the hebdomadal cycle; the tenth of the first month must have been so too: because, from the tenth of the first month exclusive to the 15th of the second inclusive, the interval would be just 35 days. We should thus prove that the 10th of the first month must have been the feria septima in the year of the Exodus, from the simple fact that the 15th or the 22nd of the second

[o] Exodus xv. 23–26.
[p] xvi. 1.: Numb. xxxiii. 11.
[q] xvi. 27, 28.
[r] v. 12.: cf. Exodus xx. 8: 9–11: xxiii. 12: xxxi. 13–17: xxxiv. 21. xxxv. 2, 3: Leviticus xix. 3: 30.: xxiii. 3.: Nehemiah ix. 14.

month was so too; without knowing any thing of the year of the Exodus itself, or of the Julian date of any of these days themselves. But the year of the Exodus being otherwise determinable to B. C. 1560, when the Dominical Letter was E; and the first of the first month being determinable to March 27; the 10th of that month, according to the Julian rule, is determined to April 5, and April 5 to the feria septima; the first of the second month to April 26, the feria septima also; the 15th to May 10, the feria septima too: the 22nd to May 17, the feria septima also, and likewise the epoch of the cycle of the Sabbath, for the use and observance of the people of God in particular.

These proofs of the truth of our hebdomadal cycle from the first until this time are so simple and so convincing, that nothing can be added to make them clearer or stronger. We will conclude with one more argument; the object of which is to shew that the calendar of the Israelites was still solar, as we have supposed, and not yet lunar.

It is the constant tradition of the Jews, that the delivery of the law took place at the same distance of time from the first passover as the feast of Pentecost was wont to do after the feast of the passover in general. In the lunar calendar of later time the stated date of the feast of Pentecost was the 6th of Sivan; but only because Sivan 6th was the 65th day inclusive from the first of Nisan inclusive also. Did Nisan consist of 30 days, and Jar also, then the 65th day from the first of Nisan must fall on the 5th of Sivan: and we shall prove that this was the case at the Exodus, if we can prove that the date of the delivery of the Law was actually the 5th of Sivan; the third month being meant by Sivan.

The people arrived at mount Sinai in the third month[s]; and on the third day, reckoned from the following morning, the delivery of the Law took place[t]. The actual date of the arrival appears to be left undefined; but it may be collected from Exod. xix. 1, 2, which specifies the arrival in the third month, on the *selfsame* day of the month, that they must have arrived on the *first* or *second* day of the month. The context proves that it was the *second*, May 27, the *feria tertia*. And the Law being delivered three days after, on the morning of

[s] Exod. xix. 1, 2; Numb. xxxiii. 15. [t] Ibid. 3: 6: 7, 8, 9–13: 14, 15, 16.

May 30, this was both the fifth of the third month and the *feria sexta*.

We shall therefore conclude our remarks on the details of the chronology of Scripture down to the Exodus, with extracting from our own chronology of the Old Testament so much as is calculated to illustrate the course of proceedings from Nisan or Abib 1, down to the institution of the Sabbath; premising to it both the first seven months of the old calendar, and the first three months of the new.

## SECTION IV.—*Chronology of the year of the Exodus from the change of the calendar to the first Mosaic Sabbath.*

*Calendar of the primitive year, Æra Cyclica* 2446, A. M. 2444—45, B. C. 1561—60.

| Months. | Midnight. | B. C. | Months. | Midnight. | B. C. |
|---|---|---|---|---|---|
| i Thoth, | Sept. 10 | 1561 | iv Chœac, | Dec. 9 | 1561 |
| ii Phaophi, | Oct. 10 | | v Tybi, | Jan. 8 | 1560 |
| iii Athyr, | Nov. 9 | | vi Mecheir, | Feb. 7 | |

vii Month, Phamenoth, March 9.
19 March 27.

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*First three months of the corrected calendar*, B. C. 1560.

| Months. | Midnight. | | |
|---|---|---|---|
| i Nisan or Abib | March 27 | Feria 5 | B. C. 1560 |
| ii Jar | April 26 | — 7 | |
| iii Sivan | May 26 | — 2 | |

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A. M. 2444 B. C. 1560 The seventh month (Phamenoth) of the primitive calendar is appointed to be the first in that of the Israelites, under the name of Abib.

Exodus xii. 1.

Nineteenth of Phamenoth. First of Abib (or Nisan.)
Wednesday, March 26, at 18 h.
Thursday, March 27, at 18 h.

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The Passover is instituted at the same time, and the lambs for this first Passover are commanded to be taken up on the 10th of Abib, and to be sacrificed on the 14th.

Exodus xii. 3–27: 43–49; xiii. 3–10.

A. M. 2445 B. C. 1560

The lambs for the Passover are taken up.

Exodus xii. 28–50.

Tenth of Abib.

Friday, April 4, at 18 h.
Saturday, April 5, at 18 h.

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Sacrifice of the first Passover.

Exodus xii. 28–50.

Fourteenth of Abib.

Wednesday, April 9, cir. 15 h. or 3 P. M.

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Tenth and last of the plagues of Egypt. Destruction of the first-born of man and of beast.

Exodus xii. 29, 30; xi. 4.

Fifteenth of Abib.

Thursday, April 10, midnight.

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Exodus of the children of Israel. Sanctification of the first-born to the Lord; and renewal of the injunctions relating to the Passover.

Exodus xii. 31–36: 40–42. 50; Deuter. xvi. 1.
...... xiii. 1–16; xi. 8.

Fifteenth of Abib.

Thursday, April 10, after midnight, before morning.

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March of the children of Israel from Rameses to Succoth. The Egyptians bury their dead.

Exodus xii. 37–39: xiii. 17–19: 21, 22.
Numbers xxxiii. 3–5.

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A. M. B. C.
2445 1560

Fifteenth of Abib.

Thursday, April 10.

---

March of the children of Israel from Succoth to Etham. The Egyptians set out in pursuit of them.

Exodus xiii. 20; Numbers xxxiii. 6.
...... xiv. 5–9.

Sixteenth of Abib.

Friday, April 11.

---

March of the children of Israel from Etham to Pi-hahiroth.

Exodus xiv. 2–4; Numbers xxxiii. 7.

Seventeenth of Abib.

Saturday, April 12.

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The Egyptians overtake the children of Israel at Pi-hahiroth.

Exodus xiv. 9–14.

Seventeenth of Abib exeunte; or eighteenth of Abib ineunte.

Saturday, April 12, about sunset.

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Passage of the Red sea. Particulars which preceded and followed it.

Exodus xiv. 15–22, (cf. Isaiah x. 26; lxiii. 11–13.)
..........23: 24, 25: 26–28: 30–31; Numbers xxxiii. 8: Exodus xv. 4–10: 19–21.

Eighteenth of Abib.

Saturday, April 12, at 18 h.
Sunday, April 13, at 18 h.

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A. M. B. C.
2445 1560

The children of Israel arrive at Marah.

Exodus xv. 22; Numbers xxxiii. 8.

Twenty-third of Abib.

Friday, April 18.

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First instance of murmuring. The bitter waters are made sweet. The people are proved by a statute and ordinance from God.

Exodus xv. 23–26.

Twenty-fourth of Abib.

Saturday, April 19.

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The people arrive at Elim.

Exodus xv. 27; Numbers xxxiii. 9.

Twenty-fifth of Abib.

Sunday, April 30.

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The people pitch by the Red sea.

Numbers xxxiii. 10.

Fourteenth of the second month, Zif or Jar.

Friday, May 9.

---

The people arrive in the wilderness of Sin.

Exodus xvi. 1; Numbers xxxiii. 11.

Fifteenth of Zif.

Saturday, May 10, morning.

---

Second instance of murmuring. Flesh promised in the evening, and bread in the morning. Institution of the legal sabbath.

Exodus xvi. 2, 3 : 4, 5 : 6–8 : 9, 10 : 11, 12.

Fifteenth of Zif.

Saturday, May 10.

A. M. 2445 B. C. 1560

The first miraculous supply of quails takes place.

Exodus xvi. 13.

Sixteenth of Zif.

Saturday, May 10, after sunset.

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Beginning of the dispensation of manna.

Exodus xvi. 13–18 : 31; Numbers xi. 7–9.
Exodus xvi. 35; Joshua v. 12.

Sixteenth of Zif.

Sunday, May 11, before sunrise.

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An homer of manna is laid up as a memorial of the dispensation.

Exodus xvi. 32–34 : 36; Hebrews ix. 4.

Sixteenth of Zif.

Sunday, May 11.

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Sixth morning of the dispensation of manna and gathering of a double rate.

Exodus xvi. 22, 23 : 5 : 26.

Twenty-first of Zif.

Friday, May 16, before sunrise.

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Temporary cessation of the manna, for the first time, on the seventh morning of the dispensation, because of the rest of the holy Sabbath. Epoch of the legal Sabbaths.

Exodus xvi. 24–30: cf. 19, 20.

Twenty-second of Zif.

Saturday, May 17.

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## CHAPTER VIII.

### *On the duration of the state of Paradise: and on the epoch of the Æra of Mortality.*

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### Section I.—*Obscurity of this subject.*

If any one thing in the history of the past could be considered more uncertain, and more incapable of being discovered at this distance of time from the beginning of things, than another, it would seem to be *this:* The duration of the state of Paradise; the exact chronological limits of the interval of time between the Creation and the Fall. And yet the same all-wise Providence, which to answer its own ends and purposes has hitherto kept this interval from coming to light, if we are not mistaken, for the same wise ends and purposes has been pleased to ordain that it should be discovered at last, and that the instrumental means of the discovery should be the primitive calendar; itself too concealed from the most learned and the best informed on the subject of ancient chronology and ancient history, who have lived in these latter times before ourselves, yet still permitted to be recovered in the time of those who are living nearer to the end of all things, even than they.

In what manner that calendar leads to this discovery; and in what manner the discovery itself, *once* made, is perceived to be substantiated not only by general considerations *a priori* of various kinds, but by a number of facts, which also have now for the first time come to our knowledge, or, if they cannot be said to be altogether new, have never yet been fully understood nor duly appreciated; we must endeavour, with the Divine blessing, to the best of our ability to explain.

### Section II.—*On the method of determining the duration of mundane time from the creation to the deluge: and on the difficulties connected with it.*

The method which all chronologers, both ancient and modern, (both those who have founded their systems on the Hebrew text, and those who have built them upon the Sep-

tuagint,) the method which all have adopted, to determine the age of the world from the creation to the deluge, and from the deluge to the call of Abraham, has been the same; viz. to reckon up the sum total of years from the birth of one patriarch to that of the next, first from Adam to Noah, as they are found set down in Gen. v; and next from Noah to Terah or Abraham, as they are specified in Gen. xi. It is self-evident that under the circumstances of the case no method but this could possibly have been employed; and therefore that to the principle of this mode of proceeding *a priori* no objection can lie.

With the chronology of the postdiluvian patriarchs we have nothing to do at present. With respect to that of the antediluvian; it is well known to chronologers, (and any one who will may satisfy himself of the fact by actual calculation,) that the numbers in Gen. v. which define the intervals of the Pædogonia in each of these instances, from Adam to Seth and from Seth to Noah, being added together without augmentation or diminution, exactly as they are set down in the text of Scripture, make up the sum total of 1656: which being the case, if they are assumed to have begun in A. M. 1, they must be supposed to have come to an end in A. M. 1657; that is, the first year of the number being A. M. 1, the last must have been A. M. 1656.

And here we cannot refrain from pausing a moment, to pay a just tribute of admiration to the wonderful economy of the Divine proceedings, especially in relation to *time:* which the pseudo-learning and pseudo-chronology of modern times have long been labouring to make us believe was the last thing regarded in the Divine apprehension of important and unimportant; and is the last thing which human inquiry into the economy of these proceedings has any occasion to take into account. It is quite certain that in the true æra mundana, (that is, in the true reckoning of annual time from the first, either in the mean natural year, or in the mean Julian constantly equated to the mean natural,) the year of the deluge was actually A. M. 1657. The tests and criteria of the true year, which have been already pointed out, can leave no doubt of that fact; and we hope to demonstrate hereafter, from testimony of a peculiar and most decisive

kind, to which we have not so much as alluded as yet, that, within 500 years of the deluge itself, it was still well known and well remembered among men that the date of that event was A. M. 1657 B. C. 2348.

It is manifest then that the method employed for arriving at the knowledge of the age of the world at the time of its first destruction, (a method so obviously dictated by the necessity of the case, and so obviously right in the principle,) did not lead to a false conclusion in point of fact. No one can say that the date of the deluge, collected in this manner from the Hebrew text, was not the true. No one can deny that what so many have thus collected from it might have been collected by all; if their various prejudices had permitted all to make use of the same means of collecting it in the same way. If it was necessary therefore that men should always have a correct idea of the true age and duration of the system of things with which they themselves have always been connected, first from the creation to the flood, and then from the flood downwards; it can never be denied that so long as they have had the Hebrew Bible they have had the means of attaining to such an idea: it never can be maintained that the simple use of the means vouchsafed in that Bible, and constantly accessible there, even in their most obvious and natural manner, has led to any thing *de facto* but the truth. But it sometimes happens that truth itself is the accidental result of the conflict of opposite and antagonistic errors: that a double error may enter into the same process of reasoning, one of which compensates for and neutralizes the other; an error of excess for instance of a certain kind, along with an error of defect of the contrary kind; the joint operation and effect of both which under such circumstances is equivalent to no error at all. If something of this kind should turn out to have happened in the present instance, it ought only to increase our admiration of that wisdom which has always so ordered the course of things that, in a matter of such importance as the knowledge of the chronology of their own world, men should never be mistaken *de facto*, except through their own fault; that is, either from their deliberate preference of any chronology as the true chronology of their proper system, to the chronology

of Scripture, or from their similar preference of any chronology, which professed to be Scriptural, to that of the Hebrew Bible.

Thus much then having been premised, as no more than due to the wisdom of the Divine proceedings in this one respect; we observe in the next place, that the first and most necessary step towards the solution of this problem of the true age of the world at the flood, the discovery that the chronology of Scripture itself, from the creation to the flood and from the flood to the Exodus at least, is not carried on in the æra mundana but in the æra cyclica; this step is no sooner taken, and the first advance thereby apparently made towards the solution of the problem itself, than we find ourselves involved by it in very great embarrassment and perplexity.

For let it be assumed that on this principle both the sum total and the details of the numbers in Gen. v. are to be understood of equable solar, or cyclical years; and that the amount of such years from Adam to the deluge is exactly 1656. It is impossible that these 1656 cyclical years could be equivalent to more than 1655 mean natural or mean Julian years. The reader does not require to be told at the present stage of our work that, if the equable year loses *one* day on the mean natural or on the mean Julian every *four* years, it loses an entire year in 1460 years: and that 1461 equable or cyclical years are after all equivalent only to 1460 mean natural or mean Julian. If so, though there might be 1656 cyclical years between the creation and the deluge, there could not be more than 1655 mean natural or mean Julian. And this would involve a great difficulty. The true date of the flood is its date in the æra mundana; and in that æra it was and it must have been A. M. 1657. Yet on this principle it ought to have been A. M. 1656. And though the difference even in this case amounts only to one year, that makes no difference to the real difficulty of the case. One year less than the truth is no more admissible than any number of years: and *παρὰ μικρὸν* is just the same thing as *παρὰ πολύ*—in comparison of the simple truth. The real chronological characters of the year of the deluge in the æra

mundana agree only to A. M. 1657: and no year to which they do not agree can possibly be the true.

In the next place; we observe also that the method hitherto employed by chronologers of reckoning up the specified intervals from the birth of one patriarch to that of another, and of assuming the sum total, without qualification of any kind, as the exact measure of the interval from the creation to the deluge, is liable to *this* objection; That it assumes the sum total of these intervals as 1656 years complete, beginning A. M. 1 at a certain time, and ending A. M. 1657 at the same time; and therefore it must assume that the parts of which this sum total is composed, the intervals of the Pædogonia in each instance, begin and end at the same time also. Now what is this time? If the world was created at the vernal equinox, and the world was destroyed by the deluge at the vernal equinox; it must be the vernal equinox. On this principle the intervals of the Pædogonia begin and end successively at the vernal equinox: and though we could not deny that this was possible, nor that in an extreme case it might not even be admissible; yet we hope we may be permitted without offence to say we do not consider it to be probable.

For what would be implied in the contrary supposition? What but that the actual births of the ten individual patriarchs, who carry on the succession of mundane time from the creation to the deluge, were so controlled and so ordered by the special providence of God, that each fell out as nearly as possible at the vernal equinox? We would not venture to say that this was impossible: God forbid! Nothing could be conceived more possible, if the Deity himself is to be supposed to have willed it. But it would assume such a series of extraordinary interpositions to bring about a certain end and purpose, that, without the authority of Scripture itself for the assumption, or without demonstrative proof of the necessity of such interpositions to reconcile the facts of these births in each instance with other matters of fact, to which they could not be reconciled in any other way; we still hope we shall be excused in saying that we cannot consider it to be probable; and we hope also before we have done with this

subject to prove that, as it is not probable, so neither is it necessary.

But thirdly, when we reflect on the peculiarity of the idiom of Scripture in reckoning current years as complete, we shall see it would be only agreeable to this idiom to speak of every one of the intervals in these ten instances as so many years complete, though some of them in reality might be only so many years current or incomplete. This idiom is so peculiar that a day more than a certain number of years complete was liable to pass for another year current; and to be reckoned accordingly. For example, if the actual interval from Adam to Seth had been only 129 years and *one* day; still, by virtue of this idiomatic mode of speaking and reckoning in such cases, it must have been represented as 130 years: for the axiom of the Jews in such cases always has been and still is, That the son of a day is the son of a year.

Who then could undertake to assure us that, in ten cases of this description, not one was to be understood of a year *léss complete* than the number which was actually specified? and if not, that one year more at least than the absolute length of the interval from Adam to the flood might not get into the supposed estimation of it according to the literal statements of Scripture? On which principle, if this absolute length, even so estimated and even in its proper æra, was no more than 1656 years, in reality it might be no more than 1655 cyclical years; nor consequently more than 1654 in the æra mundana: from which it would follow that the true year of the flood in the æra mundana, instead of being A. M. 1656, much less A. M. 1657, could not have been earlier than A. M. 1655.

But further; if we compare Gen. vii. 6: "And Noah *was* six hundred years old, when the flood of waters was upon the earth;" with vii. 11: "In the six hundredth year of Noah's life, in the second month, the seventeeth day of the month, the same day were all the foundations of the great deep broken up:" we shall see reason to conclude that, if Noah's six hundredth year did not *begin* on the first of the first month, it could not have *come to an end* before the seven-

teenth of the second month at least. But if we further compare viii. 13: "And it came to pass in the six hundredth and first year, in the first *month*, the first *day* of the month, the waters were dried up from off the earth:" though we cannot affirm it to be a necessary inference from these words, we may assert it to be an highly probable one, and spontaneously suggested by the words themselves, That the years of the life of Noah are actually dated in Scripture from the first of the primitive Thoth; or from some day very near to it.

If so, the interval from Gen. v. 28—32, and from thence to vii. 11, that is, from the birth of Noah to the beginning of the flood, which is spoken of as 600 years, and as it appears at first sight 600 complete, is in reality intended and is in reality to be understood of only 599 complete. And thus the entire interval of 1656 years from Adam to the deluge, which is to be diminished *one* year in any case, in order to equate nominal equable annual time to real natural annual time, will require to be diminished *two* years more, at least, because of the idiom of Scripture in reckoning current years as complete; *one* year between the birth of Adam and the birth of Noah; and *another*, between the birth of Noah and the flood: so that from Gen. v. 3 to vii. 11, instead of 1656 natural years from the vernal equinox to the vernal equinox again, there could not have been more after all than 1653; and the date of the deluge in the æra mundana, instead of being A. M. 1657, must have been A. M. 1654.

Such is the difficulty connected with the true date of this event, as soon as it comes to be known that it is reckoned by Scripture itself in the æra cyclica; and that the true date, whatsoever it was, is first and properly to be referred to that æra. No one can deny that it is a real difficulty. No one we hope can object to our mode of stating it, that we have not fairly represented it. But if we have neither mistaken nor mistated it; then it must be admitted to be a serious difficulty: and that, until it is explained in some manner or other, it is calculated to occasion no small degree of perplexity.

SECTION III.—*On the explanation of the difficulty just pointed out.*

A bold and unscrupulous criticism, but a rash and precipitate one, (and therefore necessarily a superficial and ignorant one too,) instead of endeavouring to untie this knot, would probably propose to cut it at once; by assuming more or less of corruption in the numbers of the sacred text from Gen. v. 3—vii. 11. But this is a mode of solving the difficulty, which we could not allow ourselves to adopt. We are persuaded that the numbers in the Hebrew text in these instances are the genuine numbers of inspiration. And this belief is fortified by the fact that, while the Samaritan, the Septuagint, and other editions of the sacred text different from the Hebrew, exhibit variations in their readings of these numbers, the Hebrew text exhibits none: the Hebrew text is still and always has been consistent with itself; and as we are persuaded with the truth.

Some other mode therefore of explaining the difficulty must be discovered if possible, instead of one so objectionable as this. And first of all it is to be observed that, whatsoever be the necessity under which we are laid of reconciling the absolute sum of equable annual time, from Gen. v. 3 to vii. 11, with the absolute sum of mean natural or of mean Julian; it does not concern both the extreme points of this interval, but only one of them. The last year of the interval must be the same, whether in the æra cyclica or in the æra mundana; viz. the year which confines on the year of the flood: for the year of the flood itself is fixed; i. e. A. M. 1657 in the æra mundana, and the corresponding year in the æra cyclica, whatsoever that was. It must therefore concern the other extreme; the first of the 130 years between Adam and Seth, and what that was in the æra cyclica and in the æra mundana too.

The question is consequently reducible to this issue; Whether the first of these 130 years between Adam and Seth was both the first in the æra mundana and the first in the æra cyclica? Now it could not have been the first in both; for in that case these 1656 years in the æra cyclica must have been absolutely the same as the corresponding 1656 in the æra mundana: since if each ended and began

at the same point of time, each must be both nominally and truly the same; and that would be impossible: 1656 cyclical years could never be the same as 1656 natural. It follows then that, if the first of these 130 years from Adam to Seth was reckoned from the beginning of the æra cyclica, it could not be reckoned from the beginning of the æra mundana. But from what point of the æra mundana could it be reckoned, except from the first? From what point in the life of Adam was the age of Adam to be reckoned, but the first year of his existence itself? And what could the first year of the life of Adam be but the first year of the æra mundana too?

The answer to this question is the solution of the whole of the difficulty with which we are concerned in this instance. And the answer to that question which occurred to our mind at last is *this:* That, with a profound but most just and most philosophical distinction, the life of Adam, as it makes part of one and the same chronological summary of the lives and deaths of the antediluvian patriarchs in general, is not reckoned in Scripture from the epoch of the creation but from that of the fall. We call this a profound and recondite distinction: for what else can it be, if it has escaped the most sharpsighted critics and commentators on Scripture, ever since there have been critics and commentators on Scripture at all? But we call it a just and philosophical distinction also; a distinction as reasonable as it is profound: and we think that, on reflection and consideration, our readers will deem it only right to call it so too.

For according to what rule could the life and death of the first of the patriarchs in this chronological summary of the lives and deaths of all be properly and consistently reckoned, different from that of the second, or that of the third, or that of any of the number down to the last? And what was the life and death of any of *them*, and the interval between, as measured by this common rule, but the natural term of human existence? And what is the natural term of human existence but something defined and prescribed by the same natural law in general; either the law which held good before the flood, or that which began to hold good after the flood, or that which holds good at present? The particular

operation of this natural law at particular times may have been different: but the law itself in general has been always the same.

Human existence then, in the natural sense of those terms, and as always subjected to a law of this kind, is something which must always have had a beginning; and something which after a time, after an interval of duration greater or less, must also have an end. It follows that the proper subject of life in this sense of human existence is the proper subject of death also; and consequently that neither life nor death in this sense can be predicable of any thing but the proper subject of a mortal existence. If there are any beings in nature which have not existed from all eternity, and yet are immortal from the law of their being itself; such beings must have begun to be, must have come into existence at a certain time: and so far their case may not differ apparently from that of the proper subject of a mortal existence too. But if such beings, once brought into existence, are immortal, they can never die. Death can never be predicable of an existence like theirs, in the sense of a termination of life; and, finite as that existence may be at one extreme, it cannot be so at the other. We believe that the angels are such beings. We believe that the angels are creatures of God as much as men; and that there was a time when even the angels were not yet in being, any more than men. We are ready and willing therefore to predicate the beginning of existence, in the sense of the beginning of life, of the angels as much as of men: but we cannot predicate the termination of existence, that is, the end of life, in other words, death, of the angels, in the same sense as of men. And, if there is properly speaking no such thing as the death of an angel, neither can there properly speaking be any life, as necessarily connected with death: for life and death, as one opposed to the other and the latter the privation of the former, are the two extremes of the same absolute interval of duration, which we call in this case existence; a duration which is necessarily finite at both ends alike; and as it had a time to begin so must have a time to end. Such an existence is a mortal existence. It is the proper existence of a subject of mortality; of one who is born both to live and

to die*. An immortal existence, if it is a created one, must be finite at one extreme, as much as this: but it cannot be so at the other. A subject of immortality therefore is not a proper subject of an existence like this; an existence comprehended between a beginning, which we call life, and an end, which we call death; and measured or measurable by the interval from one to the other between.

If Adam then himself was formed in a state and condition of being like that of the angels, destined to be immortal, not capable at least of coming to an end from the natural law of the being itself; his life, in the proper sense of the word, the life predicable of him just in the same sense as of the rest of the patriarchs, could not be reckoned from the epoch of his creation. It must be reckoned from that of his FALL. Referred to the former, his existence was never intended to come to an end; and according to its natural law it never could have done so: referred to the latter, if that was the epoch of his mortality also, however long it might continue meanwhile, it must come to an end at last. This distinction, as we have observed, is too profound and recondite to be all at once perceptible; yet too just and reasonable not to be recognised as soon as it is pointed out. And such is the character of that book of books, which we term the Bible. The more it is studied and the better it is understood, the more profound and the more philosophical it will appear.

The discovery thus made of the true epoch to which the years of the life of Adam are referred removes the difficulty which we are endeavouring to explain. We collect from it at once that, if there was only some actual interval between the creation of Adam and the fall; it must belong to a state and condition of his being which is left out of the account of his mortal existence, because it could not properly enter into it. It belonged to the æra of his immortality; not to that which must be dated from the fall, the æra of his mortality. The question is therefore simply not whether there was such an interval, (for the equation of equable annual time to mean natural or to mean Julian, from Gen. v. 3 to vii. 11, absolutely requires thus much,) but what was its length or duration?

* Nascentes morimur, finisque ab origine pendet.

The conclusion to which we have come respecting the amount of the difference between the absolute sum of cyclical time from Gen. v. 3 to vii. 11, and the similar sum of natural or Julian from the creation to the flood, is sufficient to shew that it could not be less than one year: and even if it was no more than one, it would follow that the state of Paradise before the fall must have lasted one year at least. But we have said enough also to prove that, instead of one year's difference in this amount, there might be two, and even three; in which case the state of Paradise must have lasted two or even three years also. We believe this latter to have been the real state of the case. We believe that there were really three years between the creation and the flood, which entered into the account of mundane time, but not into that of the life of Adam: from which we must infer that they made no part of his existence after the fall; they belonged entirely to his existence before the fall: that is, they belonged not to the æra of mortality, dated from the beginning of the life of Adam in the same sense as that of any other of the antediluvian patriarchs, but to the æra of immortality, dated from his creation, and from the beginning of that existence which at first was peculiar to him and intended to endure for ever. And the æra of this immortality being the proper duration of the paradisiacal state of things; if the former lasted three years the latter must have done so too.

SECTION IV.—*Chronology of the lives of the antediluvian patriarchs in the æra cyclica and æra mundana, according to the conclusions thus established.*

The conclusion to which we have thus been gradually conducted, as we observed before [a], is capable of being substantiated by various other considerations. But before we proceed to do this, we think it desirable to make an end of this part of our subject, which relates to the chronology of Genesis v. 3—vii. 11, by proposing this both in the æra cyclica and in the æra mundana, arranged in conformity to the distinction which we have just established; viz. that three years enter into the sum of mundane time from the creation to the

[a] Supra, sect. i. p. 226.

deluge, which do not enter into the sum of cyclical from Gen. v. 3. to vii. 11. This distinction being once understood, nothing is easier than to accommodate one to the other, and both to Scripture.

*Chronology of* Gen. v. 3–vii. 11: viii. 13: *in the Æra cyclica and in the Æra mundana.*

| | Patriarchs | Pædogonia | Æra Cyclica | Assumed date of births | Æra Mundana | Midnight |
|---|---|---|---|---|---|---|
| i | Adam ...... | | 4 | Thoth 6 | 4 | Apr. 30 |
| ii | Seth ........ | 130 | 134 | Thoth 1 | 134 | Mar. 24 |
| iii | Enos........ | 105 | 239 | Thoth 1 | 239 | Feb. 26 |
| iv | Cainan ...... | 90 | 329 | Thoth 1 | 329 | Feb. 4 |
| v | Malaleel .... | 70 | 399 | Thoth 1 | 399 | Jan. 19 |
| vi | Jared ...... | 65 | 464 | Thoth 1 | 464 | Jan. 3 |
| vii | Enoch ...... | 162 | 626 | Thoth 1 | 625 | Nov. 25 |
| viii | Methuselah .. | 64 | 690 | Thoth 1 | 689 | Nov. 9 |
| ix | Lamech .... | 187 | 877 | Thoth 1 | 876 | Sep. 24 |
| x | Noah ...... | 182 | 1059 | Thoth 1 | 1058 | Aug. 12 |
| | Sum collected .... | 1055 | | | | |
| | | 599 | 599 | | 599 | |
| | Year of the deluge, 600th year of Noah | 1654 | 1658 | Thoth 1 | 1657 | Mar. 20 |
| | | 1 | 1 | | 1 | |
| | Year of the descent from the ark, 601st year of Noah | 1655 | 1659 | Thoth 1 | 1658 | Mar. 20 |

It will be observed that we have introduced no change into the numbers of Scripture, as represented in this scheme, except at Genesis v. 21; the interval specified from the birth of Enoch to that of Methuselah; and in the absolute number of years from the birth of Noah to the flood. In every other instance we have retained the numbers of the sacred text; and we have reckoned them, (as that too appears to reckon,) as years complete. It is to be considered that in each of these cases the patriarch is said to have lived so many years before he *begat* his son, not before the *birth* of his son; and that would imply a difference of *nine* or *ten* months in each instance between the interval specified and the truth, understood of the birth; and a difference in defect of the

truth. In our opinion the ambiguity thus occasioned is obviated by reckoning the specified intervals, in every case but that one which we have excepted, (the interval from the birth of Enoch to that of Methuselah,) as years complete.

There was a famous question in former times which occasioned the Fathers no little perplexity; viz. What became of the patriarch Methuselah during the year of the flood? The authors of the Septuagint version, or, if not they, those who first tampered with the dates of the Hebrew text, and with the rest of that text, and brought both into the state in which they appear in the Septuagint version, so managed the matter, probably without intending any such absurdity, as to make Methuselah outlive the flood 14 or 15 years[b]: and when this was discovered to be the case, the Fathers, most of whom received the Greek version of the ancient Scriptures with implicit deference and respect, were much at a loss to account for it. For they well knew that Methuselah was not one of the *eight* who only passed the year of the deluge *in* the ark: yet by what means he had been enabled to survive it without being there Scripture did not explain, and they could not tell.

We have alluded to this question of ancient times, not in order that any of our readers should thereby be tempted to smile at the apparent credulity of the Fathers; the simplicity of whose faith in spite of any appearance of difficulty to the contrary, and their absolute submission of their own reason and of their own ideas of what was or was not probable, what was or was not possible, to what they considered to be the positive assurance of Scripture, are infinitely more to be commended, more worthy of Christians, and more to be imitated, than that captious and irreverent spirit of modern rationalism, falsely so called, which cavils at every thing even in Scripture, and demands a reason for every thing, and will not give inspiration itself credit for the simplest and plainest truths, if they do not fall in with its own prejudices. This

[b] Reliquiæ Sacræ, ii. 242–244. Annotationes in Africani Chronica, v. (Cf. 127. l. 5.): Origen, Selecta in Genesim, Opp. ii. 30 F—31. B.: Eusebius apud Syncellum, i. 35. l. 20. Cf. 215. l. 19: Ambrose, i. 1332 E, in Lucam, Lib. iii. §. 48: Augustin, Opp. iii. 380 A—B. Quæstiones ad Gen. 1. Quæstio ii.: Hieronymus, ii. 512 ad med. Quæstiones Hebraicæ, In Genesim: Chronicon Paschale, i. 36. 17—37, 11.

child-like simplicity of faith, of all the dispositions of the human mind, is the most acceptable to God. The contrary spirit of the wrangler, the caviller, the pseudo-rationalist and pseudo-philosopher, is of all the most odious and offensive to him: as in those who call themselves Christians, and who profess to receive the Bible, even to our apprehensions, it is the most inconsistent and most unbecoming. Our object is merely to shew that to meddle with Scripture, either in the hope of mending it, or to answer any other unscriptural purpose, is a dangerous thing; which will expose itself by some *reductio ad absurdum* at last: and also to make it appear, by this memorable instance of the case of Methuselah, (which the admirers of the Septuagint chronology in preference to the Hebrew for the most part have studiously kept out of sight,) that it was not so easy and obvious a matter to arrange the lives and deaths of these patriarchs in general on any principle but that of the truth, so that Methuselah, the longest liver of them all, should neither die before his time, nor yet survive the deluge, nor yet be left to perish along with the ungodly world of his contemporaries.

Now it is asserted[c] that Methuselah survived the birth of Lamech, (strictly the time of begetting Lamech,) 782 years. And Lamech having been born æra cyc. 877, reckon on 781 years complete from that date, and you come to æra cyclica 1658, the year of the flood in that æra. We are at liberty to assume, (until the contrary can be proved to have been the case,) that Methuselah was born some time between Thoth 1 æra cyclica 1658, March 20 A. M. 1657, and the day of the entrance of Noah into the ark, 40 days later, Phaophi 10, April 28[d]: and that he died and was buried between these extremes too: consequently after his 969th birthday, A. M. 1657: which is all that is necessary to justify the language of Scripture with respect to his age at his death.

c Gen. v. 26. d vii. 4, 11.

# CHAPTER IX.

*Confirmation of the conclusion respecting the duration of the Paradisiacal state by other proofs.*

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## SECTION I.—*Arguments* a priori; *tradition, a golden age, and the reason of the thing.*

The conclusion at which we have thus arrived concerning the duration of the state of Paradise is the discovery of a truth long concealed, and strictly a secret or mystery; hitherto, no doubt for the wisest reasons, kept from becoming prematurely known, yet now, no doubt for similar reasons, permitted to become known. And yet it is one of those discoveries, which having once been made excite our surprise and astonishment more at their not having been made sooner, than at their coming to light at last: so reasonable, so probable, so obvious do they appear, the moment they are comprehended.

For what was more naturally to be expected beforehand than that a state of things, such as we mean by the economy of Paradise, devised and planned by Infinite Goodness of its own free will, carried into effect and executed by Almighty Power, the ordinance and appointment of goodness and wisdom and power, without bound or limit, acting in concert, should answer the end and purpose intended by it, and proper for it and in character with it, for a certain length of time at least? What was less probable than that it should be found to have passed away, the moment it came into existence; and to have been succeeded by a totally different constitution and state of things? without any trial however brief, without any realization or actual experience of ought which creative goodness and wisdom and power had conspired to design and establish prior to this. Paradise on that principle must have been an untimely, however sweet and lovely a birth; not more lovely than shortlived and transient: and, what is more, designed by its Author itself from the first to be so.

Again, That the tradition of an age of innocence, of a felicitous and golden period, when heaven and earth were in happy communion, and man walked with God and conversed with angels; when there was no physical evil, because there was yet no moral; no want nor privation, no sorrow nor suffering, because no sin; that a tradition to this effect has lingered among mankind, that it has made part of the popular faith, that it has inspired the dream of the poet in every nation, that the gravest and most philosophical have gone hand in hand with the common people in this belief, that Socrates and Plato were as fully convinced of it as Homer and Hesiod: no one perhaps will deny. But what we demand could be the origin, or what the foundation of this tradition, except the scriptural fact of the paradisiacal state of things? And how could that serve to explain it, or how could that lay a foundation for it, if Paradise itself, as a real, a substantial, an actual state of things, never had any existence? What could the first of the children of men know of that state, except from their first parents Adam and Eve? And what could Adam and Eve have to tell their children of a state, of which even they themselves never had any actual experience? if Paradise had been even to them no more than a morning dream, a waking vision, presented to their eyes for a moment and then for ever withdrawn? of which they might be said to have known scarcely more than Moses of the promised land, and "of that goodly mountain even Lebanon," which he was permitted indeed to see at a distance from the top of Pisgah, but on which he was not permitted himself to set foot.

Again, It seems absolutely necessary that our first parents, Adam and Eve, should be supposed to have continued for a longer or a shorter time in the actual possession and actual enjoyment of that state of being, and of every thing belonging to it, for which and in which they were actually created at first, if for no other reason, yet at least for *this;* That they might know from their own experience of both states, both that in which they were at first created and that to which they found themselves condemned at last, what it was which they had lost, and what it was which they had got in its stead; not

too by virtue of any arbitrary act of their Creator, but solely as the just punishment of their own disobedience and of their own transgression.

These considerations, and such as these, we are persuaded will not be without their use, in preparing the way for the ultimate confirmation of the same presumption by arguments of a different kind. Reasonings *a priori* can never decide a question of fact; but they may contribute to render it probable. They may make it no longer surprising that that should turn out to be real at last, which was only agreeable to the most reasonable expectation which could be formed concerning it beforehand. We will now however proceed to the statement of some arguments to the same effect, of a different kind.

SECTION II.—*On the inference deducible from the birth of Cain and Abel; and from the silence of Scripture concerning the meaning of the name of Abel.*

The birth both of Cain and of Abel is historically related in its proper order of time[e]. Nor can there be any doubt that Cain was the first born son of Adam and Eve; and that Abel was the next to him: and that their third son (the next at least after the death of Abel, as appears from the name given him itself[f]) must have been Seth.

Now this being the case, it must be admitted to be something remarkable that Adam should be said to have begotten a son, "in his own likeness after his image[g]," which son it appears was Seth; and yet that no similar observation should be found premised either to the birth of Cain[h] at first or to that of Abel[i] afterwards. For were not both Cain and Abel, it might be demanded, as much the children of Adam as Seth? Were not both begotten after his image and in his likeness as well as Seth? and both before Seth too? Why then is this particular explanation premised to the birth of his third son, and not to that of his second or of his first?

In answer to this question, we do not scruple to declare our opinion that, could this have been said with truth either of the birth of Cain or of that of Abel, it would have been

[e] Gen. iv. 1, 2. [f] iv. 25. [g] v. 3: iv. 25. [h] iv. 1. [i] iv. 2.

said. But this too is one of those profound and hitherto concealed but still most just and most necessary distinctions, which are to be found in Scripture; and this silence of Scripture, concerning that image and likeness of the nature of Adam in which Cain and Abel were really begotten, is more expressive than any explanation itself could have been.

All commentators are agreed that by the actual likeness and image, in which Seth is said to have been begotten and in which he must be supposed to have been born, human nature, such as it became *de facto* in consequence of the fall, and such as it has been ever since, must be understood: the nature of mortality, the nature of infirmity, the nature of necessary and inherent tendency to sin; in one word, (what Gen. vi. 3 designates it,) the nature of FLESH. It is the nature in all respects opposed to that which Adam himself derived from the Author of his own existence[k]; which also Scripture describes as after the likeness and in the image of God[l].

Now this nature of flesh, it is evident, could not by natural descent and transmission at least have been communicated either to Cain or to Abel, if they were both born during the continuance of the state of paradise and of the state of innocence; though it must make a part of the penal consequences of Adam's transgression, and it would only be agreeable to the rule and analogy of the Divine proceedings in that respect throughout, that the loss of the original perfection of his nature by the father should be shared by both his sons.

If then the sexes were formed for each other from the first; if marriage was instituted in paradise itself; if the command "to be fruitful and multiply and to replenish the earth[m]," was given from the first; and if the state of paradise itself lasted three years; no one can deny that it is in the highest degree probable that one or both of the first two children of Adam and Eve would be born during the continuance of that state: and that the nature inherited by them from Adam, by natural descent, must have been the nature proper for that state. If thus much at least would be probable even of Abel, it must be still more probable of Cain.

[k] Gen. i. 26, 27. [l] Cf. Col. iii. 10: 1 Cor. xi. 7. [m] Gen. i. 28: ii. 18—24.

There is yet something more to be remarked on the Scriptural account of these births. In the case of Cain, the name given him at his birth is explained [n]; in the case of Abel it is not [o]. The name of Cain it appears was given him by Eve his mother at the time of his birth; and it was intended to imply that "she had gotten a man from the Lord." So at least it is rendered in our English version. The name is derived from a verb which means to *get*, to *acquire*, to become *possessed* of any thing; like κεκτῆσθαι in Greek as opposed to κτᾶσθαι. We question however whether the words of Eve are not more properly to be rendered, "I have gotten a man *for* the Lord [p]." The name appears to us to have been dictated by a mixed feeling and impulse; maternal affection, as first quickened into life and being by the first birth of a son, yet sublimed and refined by devotion, and by gratitude to the only true Author even of such a gift; a mixture of feelings worthy of paradise and of the state of innocence itself. For the words will thus imply that she had gotten a man child indeed, (to a mother the most precious of gifts,) *from* the Lord, but also "*for* the Lord;" a man child who might be returned to him, by being dedicated to him as one of his future worshippers.

With regard to the name of Abel, the silence of Holy Writ is truly significant. It simply tells us, "She again bare his brother Abel:" but there is no imposition of a name in his instance on record, nor any explanation of the name by which he was nevertheless known to have been called. And yet no one, who knows the meaning of this name, will say that it was not remarkable; and that *a priori* it was not likely to be explained.

This meaning does not appear in the English version; but in the Hebrew it does. In that language the meaning of Abel is VANITY. It is derived from a verb which denotes *to be vain*. It is synonymous with *breath* or *vapour*; the lightest and most unsubstantial of substances. It is applied metaphorically to any thing of a kindred nature; to any thing

[n] Gen. iv. 1. [o] iv. 2.

[p] The preposition is *eth*: a very general and often ambiguous particle. Compare however Gen. vi. 14: Rooms *for* the ark; and 19, *for* thee, instead of *with* thee. Compare also Exod. xxii. 25. (24 in the Hebrew) where it has the sense of "*unto*;" Lev. xvi. 16, where also it has the sense of "for them," rather than "among them."

notoriously unreal, or fleeting and transitory. An idol, of which St. Paul tells us emphatically, it is absolutely *nothing at all*, absolutely a nonentity[q], in the Hebrew idiom is *Abel* κατ' ἐξοχήν.

Gesenius and others would explain the imposition on Abel of a name like this, denoting transitoriness or shortness of continuance, by the fact of his untimely end; and could we suppose the name to have been *first* given him *after* his death, that explanation might perhaps be admissible. But who can suppose that? Yet who, on the other hand, will suppose that Eve could have given him this peculiar name, with a presentiment, or rather with a certain conviction and assurance, of his untimely end, from the moment of his birth? We are persuaded that a better explanation of the reason of the name than this is to be found.

If the state of paradise lasted three years, the birth of Cain may very probably be assumed A. M. 1 or A. M. 2; and the conception at least, if not the birth, of Abel before the termination of the paradisiacal state, and before the expulsion of Adam and Eve from paradise. Let it be conceded then as probable that Abel might be still in his mother's womb, at the time of that expulsion, yet born not long after.

No one requires to be reminded that the proper and peculiar punishment denounced upon Eve over and above what she was destined to share with Adam, for her peculiar and exclusive part in the first act of transgression, was the pain of childbirth; the pain of travail or parturition[r]. It is reasonably to be presumed that the propriety of this sentence was never more fully realized in the subsequent personal experience of any daughter of Eve from that day to this, than in the first experience of Eve herself; and if that was the case at the birth of Abel, we put it to the judgment and common sense of any of our readers, whether, when thus taught by her personal experience the change in her condition for the worse; when thus made to feel the true nature and extent of the penalty to which she was thenceforward condemned; and when contrasting the circumstances of the birth of Abel with those of the birth of Cain; it would be any thing extraordinary, any thing improbable, that she

q 1 Cor. viii. 4.

r Gen. iii. 16: cf. 2 Tim. ii. 14, 15.

should give this first son of her sorrows the significant name of Abel? a name far more significant than the name of Ben-oni, which one of the daughters of Eve, under circumstances somewhat the same, would have imposed on the son of her sorrows too.

We leave others to their own opinion of this explanation. To us it appears to be the true one, both of the name itself and of the silence of Scripture concerning it. The real meaning of this name might be known to Moses; but it is clear that it could not have been explained without leading to disclosures which probably at that time were premature. It did not at least seem good to the Spirit which guided the pen of Moses that it should be explained; and therefore *his* pen was withheld from any such explanation.

SECTION III.—*Importance of the particular Julian term of April 5 in the proceedings connected with the economy of the scheme of human redemption.*

In all the proceedings relating to the economy of the scheme of redemption, which have been left upon record attached to their proper times and seasons, if there is any one date, which appears to have been considered of more importance than another, and paramount to all the rest, it is this particular Julian term of April 5. On April 5, in its proper year, the covenant of grace with Abraham was solemnly ratified; on April 5, as the set time purposely appointed for his birth, in its proper year too, Isaac was born; on April 5, 33 years afterwards, he was offered in sacrifice by Abraham, as a type of the sacrifice of Jesus Christ; on April 5, in the year of the Exodus, the first lamb for the Passover was solemnly set apart; on the 5th of April at last, in the true year of the Nativity, our Lord Jesus Christ himself was born; and on April 5, in the true year of the Passion, 33 years also after, as Isaac had been, Jesus Christ was offered in sacrifice too.

Among these coincidences the two last are those which explain the importance attached to this particular day from the first. Every thing else, however remarkable in itself, and however closely connected with the plan and economy of

the scheme of redemption, which was done and transacted on this day, was so because the Birth and the Passion of Jesus Christ were destined to happen on this day. But what is the ground of the connection between this day in particular and the Birth and the Passion of Jesus Christ? That is the real question which we have to answer. That is the secret or mystery which we have to explain if possible: if it be proper at least, or if it be permitted us, to attempt to explain it at all.

It is no unreasonable assumption that even in this case this question could never be answered, nor this secret ever be discovered, without going back to the beginning of things; and without taking into account the possible circumstances of the first act of transgression itself, which laid the foundation of this whole scheme and economy, so complicated in its details, so diversified in its circumstances, so gradual in its development; the entire and complete execution of which in all its parts required and still requires nothing less than the entire duration of mundane time itself. If the fifth of April was the date of this first act of transgression, if the fifth of April was the date of the fall, if the fifth of April was the date of the judgment of all the parties concerned in that act of transgression, if the fifth of April was the date of the promise of the future seed, who should undo the effects of that act in due time and bruise the head of the serpent; there would be sufficient in these coincidences, even to our own apprehension of what was probable, and what was consistent, and what was to be expected, to determine both the Birth of Jesus Christ at one time, and his Passion at another, at last to this one day.

Let us assume then that A.M. 4 B.C. 4001, being the close of the paradisiacal state of things, must also have been the year of the fall. In that year the Dominical Letter was G F: consequently April 5 was the *feria sexta*. Now it is certain that our Lord suffered on the *feria sexta*, and on this day April 5 too. And this is explained, if the date of the fall, and the date of the first promise of a deliverer from the effects of the fall, who nevertheless must accomplish that deliverance only by suffering, was April 5 and the *feria sexta* too. It has been the tradition of the Christian church from

a very early period, (to the fact of which we have the testimony even of Irenæus [s], one of the oldest of the fathers, and we may add, one of the most sensible and judicious too,) that our Lord suffered, to undo the effects of the fall, on the same day of the week on which the fall itself took place. And this tradition would thus appear to have been always founded in truth.

### SECTION IV.—*Change of the calendar reckoning at the Exodus.*

We have already had occasion to explain the matter of fact, relating to the change of the calendar reckoning of annual time for the particular use and observance of the people of Israel, 14 days before the date of the Exodus itself, April 10 at midnight or soon after; that is, to March 27 at midnight, according to the rule of the Julian calendar, B. C. 1560. It is now the proper time to inquire (with all submission and reverence) into the probable reasons of the change so made at this juncture of circumstances; if any such may be discoverable.

Now when the fact is known that the first tenth day of the first month, according to this new calendar reckoning of annual time, by virtue of the change so made, was necessarily determined to the Julian April 5; we cannot hesitate to infer from this fact itself that the change was made and at this particular time in order that this coincidence might take place; in order that the tenth day of the first month in this new style might coincide with April 5. But what was the reason which made it necessary that the tenth of this month should coincide with April 5? The lambs for the first passover, the passover first appointed at the same time also, the passover which was destined to effect the deliverance from Egypt, were commanded to be taken up and to be set apart on this day too. These first lambs, so appointed and so set apart for the first purpose of that kind, were typical of the

[s] Irenæus, v. xxiii. 435. 9–23. Cf. Ephraim Syrus, Opera, iii. 604 D. E. De Diversis, Sermo ii. Also Chrysostom, tom. vi: In Samaritanam, 412. C. Here it is proper to remind the reader of the extract from the Vita Adami, produced supra, Diss. ix. ch. iv. sect. xv, Art. xiii. p. 119; an apocryphal work indeed, but of undoubted antiquity. In this the fall, as we have seen, was actually dated on April 5.

true paschal lamb, if ever any after them were so. If the true paschal lamb was destined to be born in due time, and to be set apart for the great paschal sacrifice, on this day, April 5; it was only consistent that the first lambs for the first passover, each in its typical capacity, should be first set apart on this day too.

The 19th day of the seventh month of the old calendar at this time having been constituted the first day of the first month of the new; this first day of the first month of the new calendar B. C. 1560 bore date March 26 at 18 hours, or March 27 at midnight; and the tenth of that month bore date April 4 at 18 hours, or April 5 at midnight. Let us call this first month Nisan. If we go forward from the first Nisan, that of B. C. 1560, to the 1557th, that of B. C. 4, (the year of the Nativity,) we find the first of Nisan then too bearing date March 27 at 18 hours; and the tenth on April 5 at 18 hours. Nor can any one say that this coincidence also might not be present to the mind of the Deity, when the change of style was appointed at the Exodus; nor that one final end of the change itself might not be that Nisan 10 at the Exodus, *mutatis mutandis*, might answer to Nisan 10 at the Nativity, and both to April 5.

Still the coincidence in this instance is not complete: for Nisan 10 at the Exodus was bearing date strictly April 4 at 18 hours; and Nisan 1 March 26 at 18 hours, not March 27 at 18 hours. But if we go back to A. M. 4 B. C. 4001, and suppose April 5 that year dated from midnight, or April 4 at 18 hours, to represent Nian 10; then March 26, at 18 hours, or March 27 at midnight, becomes immediately the representative of Nisan 1. And this establishes a perfect coincidence between the Nisan of B. C. 1560 and the Nisan of A. M. 4 B. C. 4001; which would explain the correction of the primitive calendar made at the Exodus, and the final end contemplated by it. Every one now must allow it to be probable, that this change in the reckoning of annual time was purposely made, in order to bring the Nisan of the Exodus to a state of entire and total agreement with the Nisan, such as we have supposed, of A. M. 4 B. C. 4001.

SECTION V.—*Duration of the personal ministry of our Lord.*

Great difference of opinion has always existed on this particular question of the duration of the personal ministry of our Lord Jesus Christ, from the time when he entered upon it, by openly assuming his proper character of the expected Messiah, to the time when he consummated the end and purpose of his ministry itself by his death and passion. It is well known that it has sometimes been reckoned at one year, sometimes at two years, sometimes at three, sometimes at four: and not merely in modern times and among the learned at present, but in ancient times too.

The oldest indeed and the most authentic tradition on this point, that which approaches the nearest to the apostolical times themselves, and that which is supported by the most unexceptionable testimony, never represented it at more or less than three years. Three years too is the length of the period prescribed beforehand for it by the prophecy of the seventy weeks[t]: and this is the length which results from the Gospel history itself, rightly understood, rightly arranged, and rightly harmonized with itself[u].

From the first passover attended by our Lord in his proper character of the Messias, April 9 A. D. 27, to the passover at which he suffered, April 5 A. D. 30, from Nisan 14 coincident with April 9 to Nisan 14 coincident with April 5, the interval, measured by annual lunar time, was three years complete; measured by solar or Julian, from April 9 to April 5, it was four days less than three years complete. If however we date the first open assumption and the first overt assertion of his proper character, on this occasion itself, with the day of the cleansing of the temple A. D. 27; we have seen reason to conclude that that day was Nisan 10, April 5 itself[x]: so that from Nisan 10 in this year, April 5, the proper beginning of his personal ministry, to Nisan 14 A. D. 30, April 5 also, its proper termination, the interval in solar or Julian time was actually three years complete.

[t] Vide our Dissertations. Diss. xiii. vol. i. 451 sqq.: App. Supplement to Diss. xv. and App. Diss. xix: vol. iv. 259 sqq.

[u] See our own Dissertations in general, and Prologomena, cap. iv. 171 sqq.

[x] Dissertations. Diss. xii. vol. i. 405: xxxix. vol. iii. 105: iv. 239 sqq: Prologomena, cap. iv. p. 190: Harmonia, pars secunda, § xi.

The personal ministry of our Lord is not to be dated from his birth, April 5 Nisan 10, B. C. 4, but from this first assumption of his proper character, exactly 30 years after; at the full age of a master or teacher, as the Jews of those times reckoned it; and at the acme of the perfection of human nature itself in both its constituent parts[y]; Nisan 10 April 5 A. D. 27. It is from this time not from that of his birth that we must date the beginning of his *day;* and from its beginning to its end that we must estimate the exact limits and measure of his day[z]; the time from which he began to appear as Messiah the Leader[a], as the Shiloh of ancient prophecy, as the son of man, as the seed of the woman, as the second Adam: bearing his share and more than his share for this prescribed period of time of the common evils of our common humanity; its moral and physical grievances, its trials and temptations, its privations and wants, its pains and afflictions, its sorrows and griefs; every thing in short but its sins: and all, to recover to our fallen nature that birthright of immortality which it once indeed possessed in the person of Adam, but had long forfeited also, as it might seem for ever, in the person of Adam likewise.

The question may often have occurred to serious and reflecting minds, why the duration of the personal ministry of our Lord was limited in such and such a manner? not why it was limited in *some* manner, but why in *one* manner more than *another?* Why it was confined to one year, (if that was its actual length,) and not extended to two? or why it should have been restricted to three years, if that was actually the case, and to neither more nor less than three? Such questions might naturally occur to minds imprest with a full and entire conviction that in a case of this kind nothing was to be considered contingent and accidental, nothing arbitrary or positive; nothing to have been done without the gravest

[y] On this subject, see our Dissertations also: Diss. xi. vol. i. 367–380.

[z] See John viii. 56. (cf. ii. 4.) His day in this sense is to be distinguished from his *hour* — a particular part of that day, the close of it, the term appropriated to his suffering more particularly: Matt. xxvi. 18: 45: John vii. 30: viii. 20: xii. 23: 27: xiii. 1: xvi. 2. 4. 32: xvii. 1: Mark xiv. 35: 41: Luke xxii. 53. See our Diss. iii. 10: iv. 399. On this point also see our Exposition of the prophecy of the seventy weeks.

[a] See our Dissertations, vol. iv. 355, 356. App. Supplement to Diss. xv. &c.

and most sufficient reasons. And in answer to such questions we might conceive sundry explanations, and might propose divers conjectures of our own; but it is certain that we never could know the truth without an express revelation; nor ever even have divined it with tolerable assurance of certainty if the Divine wisdom had not allowed the duration of the paradisiacal state of things too to come to light.

But when we have good grounds for supposing that the duration of the state of things prior to the fall was three years, and three years only; it ceases to be a mystery any longer why the duration of our Lord's personal ministry should have been three years also, and only three. It is the uniform testimony of the Christian Scriptures that our Lord was the "second Adam[b];" and that as in the first Adam all have died, so in the second Adam shall all be made alive again. In other words, the gift of immortality forfeited in the first Adam is recovered in the second. We may perceive then in these two dispensations, that of the state of things before the fall, and that of the Christian ministry, an exact analogy; a perfect counterpart of the principal circumstances of the one to those of the other: a first Adam, and a second Adam: the first Adam of the earth, the second Adam the Lord from heaven: the first Adam, formed for immortality, the second Adam, the heir of immortality itself; three years immortal existence of the first Adam, three years mortal existence of the second Adam; immortality lost in those three years, recovered in these; the same day the date of the loss and the date of the recovery: the same day the end of the immortal existence of the first Adam and of the mortal existence of the second: the former the epoch of mortality to the natural seed of the first Adam, the latter the epoch of immortality to the spiritual seed of the second Adam. The comparison might be drawn out to a still greater number of points of resemblance. But these are sufficient for our purpose at present. The reflections of the reader will supply the rest.

It must cease after this to appear surprising that this day, the 5th of April, the date of the original act of transgression B. C. 4001 and the day of its expiation A. D. 30, should

[b] Rom. v. 14: 1 Cor. xv. 45. 48.

turn out to be also the date of every thing in the whole history of time, and of the dealings of God with man since the fall, the most closely connected with both these things, which has ever happened; the date of the first sacrifice ever offered in *faith*, the sacrifice of Abel the righteous; the date of the covenant of promise or covenant of grace concluded with Abraham; the date of the birth of Isaac; the date of the sacrifice of Isaac; the date of the first tenth of Nisan and of the designation of the first paschal lambs in Egypt. The true ground of surprise would be the discovery that the case was otherwise: that any of the facts which we have mentioned came to pass in its proper order of time, and with the same ultimate reference to the facts of the Christian history, and yet not on this day.

Let us be permitted to observe too that, after this proof of the connection between the duration of our Lord's personal ministry, and that of the state of Paradise, the question concerning that duration, which has occasioned so much difference of opinion, ought to be considered as set at rest. It must now appear that even the duration of our Lord's personal ministry was dependent on something else; and that something the term and duration of the state of Paradise; that the former was limited to three years because the latter had been so before it; that such is the connection between these two things, separated as they were by an interval of four thousand years asunder, that, the moment this connection comes to be known, the fact of either of them is an infallible argument of the other: and could we suppose it to have been known, before the actual coming of our Lord, that the state of Paradise had lasted three years, it must have been inferrible from that fact only that his personal ministry when he did appear would last three years also. And in like manner supposing it known to us, from the facts of his personal history itself since his appearance, that his ministry lasted three years, we should be justified in arguing from that fact alone that the state of Paradise must have lasted three years also.

SECTION VI.—*On the æra of immortality and the æra of mortality, in Scripture; and on the date of the expulsion from Paradise.*

It is a corollary resulting from the above reasonings and conclusions that Scripture recognises a double æra in mundane time in connection with human existence on the earth; an æra of immortality, dated on the first day of creation April 25 A. M. 1 B. C. 4004; and an æra of mortality, dated on the day of the fall April 5 A. M. 4 B. C. 4001.

The fact of this distinction, if we have not been altogether mistaken in our preceding inferences, cannot be denied: and the fact being admitted, a certain appearance of anomaly *prima facie* seems to be involved in it, amounting to *this;* That the former æra, the æra of immortality, was dated from the vernal equinox, the latter æra, that of mortality, is not so: for April 25 A. M. 1, as we have seen, was the mean vernal equinox; April 5 A. M. 4 as our tables also shew was 19 days before it.

It does not appear to us that this distinction constitutes any difficulty. An æra of immortality and an æra of mortality are such totally different things, that a common epoch, it might be supposed, could not be proper for both: and if there was any natural fitness, to make the vernal equinox the most suitable epoch for the beginning of an æra of the former kind, it must be just as unsuitable naturally for the epoch of an æra of the latter kind. In short we can perceive no connection between the date of the fall and the vernal equinox in the natural year; as we may between the vernal equinox and the creation. If this distinction concerns any thing in particular, it is the question of the absolute duration of the state of things, dated from the creation, the vernal equinox April 25 A. M. 1, to the date of the fall A. M. 4, and to the date of the expulsion from Paradise, consequent upon the fall; whether that was three years exactly, or more or less than three.

We cannot infer from the Scriptural account of the fall, and of the expulsion from Paradise in consequence of it, Genesis iii. 22–24, that the latter must necessarily have taken place immediately after the former. We have seen

reason to conclude that sacrifice must have been instituted, as a positive rite at least if nothing more, in consequence of the fall; and we think it more probable it would be instituted in Paradise before the expulsion than after it. To judge too from the traditions recorded above[c] from the Λεπτὴ Γένεσις, and from the Vita Adami, (apocryphal productions indeed, but of great antiquity,) it seems to have been known to the church of the apostolical times, from the same authority and through the same channel from which and through which many secrets, connected partly with the past and partly with the future, appear to have come to its knowledge also, and to have been perpetuated by tradition; that there was an interval, of a certain length, even between the transgression of our first parents and their final expulsion from Paradise.

We have indeed nothing of our own to propose on this question but a conjecture; and we do not feel confident that to propose our conjectures merely on such questions is not to exceed the bounds of propriety. We will observe however that even the personal sojourn of our Lord upon earth, after the close of his ministry, (which no one, we should suppose, could possibly think of extending *de facto* beyond the day of his Passion, April 5,) was protracted, in one manner or other, for the period of 40 days: and that the date of his finally ceasing to be present on earth, in any such sense as before, was not April 5 but May 16. Was there any thing analogous to this with respect to the sojourn of our first parents in Paradise, even after the fall? If there was, it would be competent to explain this fact in the personal history of our Saviour also. It would demonstrate that, in this circumstance too of the duration of his sojourn on earth, it was critically adapted to the duration of the state of things in Paradise. From one of these facts therefore we think we are authorized to reason to the other; and if, though our Saviour's ministry was consummated on April 5 A. D. 30, his sojourn on earth was not terminated till May 16 the same year; we propose it as a probable inference from that fact that, though the fall of our first parents took place on April 5 A. M. 4 B. C. 4001, their final expulsion from Paradise did not take place until

[c] Supra, p. 119.

May 16 the same year also; between which two things this coincidence may also be pointed out, that May 16 A. M. 4 B. C. 4001 was the same feria of the hebdomadal cycle as May 16 A. D. 30; and both the feria quinta*.

* This day too, May 16, is memorable, as we have seen, in being the date of the descent of Noah from the ark, and consequently of the new æra in the existence of this world, and of mankind, which began with that event: and in being the date of the first dispensation of manna, at a double rate, after the Exodus.

The duration of the state of Paradise having thus been discovered, it furnishes the best explanation also of that particular economy, relating to the first cycle of leap-year in connection with the Mosaic creation, on which we had occasion to say so much, supra p. 35–54. That cycle consisted *de facto* of *three* years, not of *four;* but these three years it appears coincided with the duration of the state of Paradise. We have seen every reason to believe that, ever since time itself began, it has been measured or measurable by the cycle of leap-year, and the same kind of cycle too. But if so much of time as bears date from the Mosaic creation, and is in fact the proper measure of the Mosaic creation, (of time coincident with the term and duration of the Mosaic creation;) in particular the course and succession of time which bears date from the fall, and is therefore the proper measure of the æra of mortality, may be regarded on that very account as something isolated of its kind, in comparison of every thing of the same kind before and after it, as something interposed, for uses and purposes of its own, between a duration of the same kind before it and a duration of the same kind after it; the same cycle of leap-year might not be proper for both. Julian time prior to the Mosaic creation, and prior to the fall, might have its proper cycle of leap-year; and Julian time subsequent to both might have its proper cycle too; and in general these might be the same. But the former is the Julian cycle of the æra of immortality, the latter is the Julian cycle of the æra of mortality. For some reason or other it might not seem proper that these should be mixed with each other. Certain at least it is that by virtue of the peculiar economy which has been pointed out, relating to the first three years of mundane time, they have not been mixed together. The cycle of the æra of immortality has never run into that of the æra of mortality.

# DISSERTATION XI.

*On the antemundane Chronology of Scripture.*

## CHAPTER I.

SECTION I.—*Reasons for resuming the subject of the Chronology of Scripture, and for considering it in another point of view.*

THE chronology, of which we have been hitherto treating as of the chronology of Scripture, is limited to the interval between the Mosaic creation and the Exodus. The chronology actually contained in Scripture goes much further back than the Mosaic creation. It is impossible therefore to do justice to a subject, like that of the chronology of Scripture in general, without extending our inquiries beyond the epoch of the Mosaic creation. A work like ours, which proposes to treat of time in all its relations, not only those by which it stands connected with the existing constitution of things, the proper beginning of which is the Mosaic creation, but those also by which it is connected with any thing older than that, of which the fact of such a connection is capable of being established; such a work, even in the proper discharge of its own duty, would seem to be bound to follow up and investigate the history of time beyond the epoch of the Mosaic creation, if time itself appeared to pass beyond it. There are special reasons to render this necessary, for the sake of the truth itself; because of the false but very general opinion prevailing in our own day, that chronology properly so called is the most indefinite part of revelation; and has been purposely left so, in order to allow free scope to human researches, human conjectures, human conclusions, respecting the duration of their own system. It seems only excusable that men should endeavour to clear up a point for themselves in the best manner they can, without the assistance of Scripture, which Scripture itself has purposely left unexplained;

and that they should make use of any data, with that view, which are any where to be found, except those which are furnished by the Bible; in which and which only they think it superfluous to look for any.

An affectation of deference to the authority of Scripture is still kept up. It is not yet openly maintained and on all hands that the whole of the Bible must be set aside as a dead letter. But men have undertaken to define between the objects of faith in the Bible, and the objects of reason. They have drawn the line up to which faith or belief is a duty, and beyond which scepticism or doubt is a duty too; and not only venial but necessary. The doctrines of Scripture still maintain a precarious hold on their assent; are received in profession at least, and nominally, still. Its historical parts, the simplest and clearest parts of its teaching, with a strange inconsistency, are called in question or given up; are treated as legends, traditions, or fables; with a possible mixture of truth at bottom, but so overlaid with fiction as scarcely to be separable from it. The chronology of Scripture necessarily shares in the treatment of its history. It is impossible that men should be able to sum or to reckon up the former, who cannot or will not understand the latter.

On this subject indeed of the chronology of Holy Writ in general, the utmost confusion of ideas, and therefore the most complete misapprehension of the truth, may very well prevail among sceptical men; when even the friends of revelation and believers themselves to a very great extent are chargeable with the same kind of mistake, and with the same kind of ignorance, also. The impression under which we have all been brought up, (for we do not exempt ourselves, any more than others, from this common prejudice,) confirmed by the consent and agreement of divines and commentators, is this: that the chronology of revelation itself goes neither backwards nor forwards beyond the beginning and the end of the present system of things: and consequently is very limited even in its greatest extent. We trust we shall be rendering only an acceptable service to our readers, while we are discharging our proper duty also, if we endeavour to shew, from the intimations of Scripture itself, what is the real nature of that system of time which is actually revealed in the Bible; and

whether its true limits are such as these or not: what is the length and breadth of the divine chronology in opposition to that false chronology, which well meaning but injudicious interpreters of Scripture have hitherto substituted for it; and still more so, to those utterly baseless and visionary systems of every kind, which learning and criticism (falsely so called, because forgetful of their duty to God, and ranged on the side of infidelity and falsehood) would not only substitute for that of Scripture, but would set up against it, as more worthy of credit than the chronology of Scripture itself.

The subject indeed, on which we are proposing to enter, is not one to be lightly and presumptuously taken in hand. It is mysterious and awful in the highest degree. No finite intellect, not even with the light and direction of revelation itself, could venture to approach to its consideration, without the most intense conviction of its magnitude; and without a proportionably deep and well-founded apprehension of its own incompetency to comprehend and to treat of such a subject aright. In a case like this, we must begin with a total and absolute distrust of ourselves; a total and absolute reliance on something else. We can know nothing upon such a subject, except from Scripture. Our business is simply to refer to Scripture; to discover what is actually contained in Scripture relating to this subject; to collect, to arrange, and if need be, (provided it be done with due caution and circumspection,) to *reason* from the intimations and data of Scripture. And we have nothing to beware of in the due execution of our task but the popular and yet most absurd and irrational prejudice, that even on such points as these Scripture is not to be understood in its simple and obvious sense; that the sacred penmen, through whose instrumentality the Spirit of truth has been pleased to leave such intimations on record, expressed themselves at random; or intended their words to be understood in any but their literal and grammatical sense; that they did not know what they were saying or proposing to say, quite as well as those, who at this distance of time would make them say any thing but what their words really appear to say.

### Section II.—*On the Scriptural use of the word αἰών. On the classical sense of αἰών.*

No word is of more frequent occurrence in connection with this subject of the chronology of revelation than *αἰών*: and none is of greater importance to the right understanding of the doctrine of Scripture upon this subject too. It is by all means necessary that we should begin with considering this word; and with arriving, if possible, at a clear idea of the idiom of Scripture in the use of it.

Preliminary then to this discovery we observe that there is in the Greek language a particular class of derivative terms, which all agree in being obtained from their primaries according to the same analogy, and all in carrying with them the primary idea similarly modified and changed. If we must give a name to this class of derivatives, we must call them *frequentatives*, in the sense of amplificatives or multiplicatives. It is peculiar to them to retain the simple idea of their primary terms, but *repeated*, *increased*, and *multiplied;* and possibly even indefinitely: so that, whereas the primary idea is necessarily finite or singular of its kind, this derivative and secondary one is indefinite and plural. It is the primary, simple and singular, idea amplified and augmented to any conceivable extent.

We shall render our meaning more intelligible by some actual examples of the kind of words in question. Thus ἄμπελος in Greek is the word for the simple idea of a *vine;* ἀμπελὼν is a word obtained from ἄμπελος, by changing the termination ος into ων; and ἀμπελὼν, so obtained from ἄμπελος, is no longer a *vine* but a place of vines, a locality of vines; in one word a *vineyard:* which must be a *collection* of vines, must contain more than *one* vine at least, and may contain any number of vines. Ἐλαία is the Greek for an olive tree; ἐλαιὼν is obtained from ἐλαία by changing α into ων; and ἐλαιὼν is no longer an *olive* but an *oliveyard*, a collection of many olive trees within one and the same locality. Δένδρον is the Greek for a *tree;* δενδρὼν is derived from it by changing ον into ων: and δενδρὼν is now not a *tree*, but an assemblage of trees, like *saltus* in Latin, or *forest*

in English; one locality indeed, but in which there must be many trees.

These three examples are sufficient to illustrate our meaning*. It appears from them that masculines, feminines,

* It is scarcely necessary to multiply instances of words of such common occurrence as those which we have been describing; and which the memory of the classical reader will so easily supply for itself. Should any of our readers however wish to see more specimens of the same kind, the following may be mentioned.

Δρυμὸς denotes a copse or bush or thicket in Greek; δρυμὼν any number of such copses or thickets—a bosky bourne: like sylva in Latin, as distinct from saltus. Ἴον is a violet; ἰὼν a violet-bed: ῥόδον is a rose, ῥοδὼν a rose-bed: ῥοιὰ a pomegranate, ῥοιὼν a garden of pomegranates. Σῖτος is bread-corn; σιτὼν a collection of bread-corn, a granary. Κοίτη is a bed; κοιτὼν a place of beds, a bedchamber. Ἀφέδρα is a repository or receptacle of excrement; ἀφεδρὼν a collection of such receptacles: cf. Matt. xv. 17: Mark vii. 19. In the great cities of antiquity, Rome, Constantinople, Alexandria, (perhaps in all,) there were such places in public which stood by themselves.

Ξένος is a stranger or guest in Greek; ξενὼν a place of strangers or guests; a guest-chamber.

*χωρὶς ξενῶνές εἰσιν οἷ σ' ἐσάξομεν.*—Alcestis, 543. cf. 547.

Παρθένος is a virgin: παρθενὼν a place of virgins, a virgin's chamber, that part of the house which was appropriated to virgins.

*ἐπεί σε μήτηρ παρθενῶνας ἐκλιπεῖν*
*μεθῆκε.*—Phœnissæ, 89. cf. 194.

Λουτρὸν is a laver; λουτρὼν a place of lavers, a bath; in which sense it occurs in Æschylus:

*λουτρὼν δ' ἐξεμαρτύρει φόνον.*—Eumen. 461.

Κευθμὸς is a place of concealment; κευθμὼν a collection of such places. Hades contained many such. Hence in the Hecuba of Euripides, l. 1:

*ἥκω νεκρῶν κευθμῶνα καὶ σκότου πύλας*
*λιπών.*

And in the Helene, 24:

*Ἰδαῖον ἐς κευθμῶν' Ἀλέξανδρον πάρα.*

Ἀνὴρ is a man; ἀνδρὼν a man's chamber:

*πατρὸς κατ' ἀνδρῶνας εὐτραπέζους*
*ἔμελψεν.*—Agamemnon, 243.
*ἄγ' αὐτὸν εἰς ἀνδρῶνας εὐξένους δόμων.*—Choëphori, 712.

In this instance it is observable that the word is not derived from the nominative ἀνὴρ, but either from the genitive singular ἀνδρὸς, or from the genitive plural ἀνδρῶν. If from the latter, it must have been so derived by merely changing the accent: and perhaps this was in reality the way in

and neuters, in the Greek language, are all alike capable of being modified in this manner both in form and in signification; and that it makes no difference either to the process or to the effect of the process whether the primary termination is *ος* or *α* or *ον*. It is observable too as another common character of all such derivative terms, that they compose a particular class of accentuated words; that all have the accent on the final syllable; and consequently that all are what grammarians call *oxytones*.

Now *αἰὼν* is evidently a term of this description. There is no difference externally between *αἰὼν* and *ἀμπελὼν* or *ἐλαιὼν* or *δενδρών*. The *prima facie* inference therefore from this fact would seem to be that, as *ἀμπελὼν* was derivable from *ἄμπελος*, *ἐλαιὼν* from *ἐλαία*, and *δενδρὼν* from *δένδρον*; so *αἰὼν* must be derivable from *αἶος* or *αἶα* or *αἶον*. With respect to the first two of these words; *αἶος* does not occur in Greek,

which all such words as these were obtained from their proper themes; i. e. from the genitive plural, by the change of the accent; which would be more in unison with the notion of plurality which they all alike carry along with them.

We may trace this fundamental idea even where the immediate application of it is not so perceptible. *Θύρα* is a door; *θυρὼν* is not a multitude of doors, but still it is something *more* than a *door;* it is the *whole* of the space appropriated to the door—to the ingress and egress of houses:

τίν' αὖ σὺ τήνδε πρὸς θυρῶνος ἐξόδοις.—Soph. Elect. 328.

παρῆλθ' ἔσω

θυρῶνος.—Œdipus Rex, 1241.

*Νύμφη* is a bride; *νυμφὼν* is not a place of brides, but it is still a bride-chamber; a place where the friends of the bride and bridegroom of both sexes must assemble and meet together: cf. Matt. ix. 15; Mark ii. 19; Luke v. 34. *Αὐλὸς* is an oblong pipe or tube, (like a fife or flute); *αὐλὼν* is not a collection of such tubes, but metaphorically it is applied to the channels running between one island and another, or between the islands and the mainlands, resembling such pipes or tubes:

ἢ ποντίους αὐλῶνας.—Soph. Trach. 100.

And even to the valleys or depressions of the surface of the earth:

καίτοι περάσας κοῖλον αὐλώνων βάθος.—Eur. Rhesus, 112.

*Πρὼν* is the Greek for a promontory, derived from *πρὸ* or the obsolete *πρός*:

Λοκρῶν ὀρεῖοι πρῶνες.—Soph. Trach. 788.

The idea of multitude or collectiveness cannot enter into this word; but that of *intensity* does: of projection or prominence in a remarkable manner: such being the characteristic distinction of all *forelands, headlands,* capes or promontories in general.

but *ævus* does in Latin [a]; *αἶα* occurs, but chiefly if not solely in the poets, in the sense of *γαῖα* or the earth, (in all probability derived from *αἶα*, with the Æolic digamma prefixed;) and *αἶα*, in the sense of the earth, may be founded in the same idea at bottom as *αἰὼν* itself, in the sense of eternity. But as to the third, or *αἶον*, which was just as capable of giving birth to a derivative like *αἰὼν* as either of the other two, this too, in the simple form of *αἶον*, may not occur in the Greek at present; but that is no proof that it might not once have done so.

The word *ævum* not only occurs in the Latin language, but is classical and of good authority in that language. The ancients, speaking from actual comparison of one of these languages with the other while both were still living languages, tell us the Latin was little more than a dialect of the Greek; and that among the four dialects into which it was usual to distinguish the Greek, the Ionic, the Attic, the Doric, and the Æolic, the Latin resembled the Æolic most of all. On this point we shall be content to quote the testimony of Dionysius of Halicarnassus [b]: *Ῥωμαῖοι δὲ φωνὴν μὲν οὔτ' ἄκραν βάρβαρον οὐδ' ἀπηρτισμένως Ἑλλάδα φθέγγονται, μικτὴν δέ τινα ἐξ ἀμφοῖν, ἧς ἐστιν ἡ πλείων Αἰολίς.*

Now this same author also [c] informs us that there was in the ancient Greek language a letter or character, which in form resembled our F, and in pronunciation our F, or V, or Y, or W, or B, or G, (for it seems to have had all these different sounds under different circumstances [d],) which was once in common use; but in his own time had long ceased to be so: *Σύνηθες γὰρ ἦν τοῖς ἀρχαίοις Ἕλλησιν, ὡς τὰ πολλὰ προτιθέναι τῶν ὀνομάτων, ὁπόσων αἱ ἀρχαὶ ἀπὸ φωνηέντων ἐγίνοντο, τὴν ου συλλαβὴν, ἑνὶ στοιχείῳ γραφομένην· τοῦτο δ' ἦν ὥσπερ γάμμα διτταῖς ἐπὶ μίαν ὀρθὴν ἐπιζευγνύμενον ταῖς πλαγίαις, (Ϝ) ὡς Ϝελένη καὶ Ϝάναξ καὶ Ϝοῖκος καὶ Ϝανὴρ, καὶ πολλὰ τοιαῦτα.*

This character is known to the learned by the name of the Æolic digamma or double gamma; and though that name would appear to restrict it to the Æolic dialect, there is no doubt that Dionysius was strictly correct in speaking of it as

[a] See Forcellini Lexicon in voce.
[b] Antiquitates Rom. i. 90.
[c] Ibid. i. 20.
[d] *y*, *ἦρ*, ver, year: *w*, *ἴα*, via, way: *οἶνος*, *ϝοῖνος*, vinum, wine: *νέος*, *νέϝος*, novus, new: *ὅλος*, *ϝόλος*, whole: *g*, *ᾠὸν*, *ᾠϝὸν*, ovum, egg.

characteristic originally of the Greek language in general. If the Greek of Homer at least is the oldest and most authentic specimen of the ancient state of that language; the digamma pervades the Iliad and Odyssey from beginning to end: and it is to be supplied in a thousand instances in the pronunciation where it does not appear in the text. Still it is true that the Æolic dialect retained this common characteristic of the ancient language after the other dialects had discarded it: as is proved by its actual presence in Æolic inscriptions of comparatively recent date. And if the Latin language was strongly impregnated with the Æolic Greek, and in fact was only a dialect of the Æolic, it might be expected to appear in that; especially in words derived from the Greek, or common to it with the Greek; such for example as *vis* from Ϝὶς, *vicus* for Ϝοῖκος, *vinum* for Ϝοῖνος, *ovis* for ὄϊς or ὄϜις, *ovum* for ὠϜὸν, and the like.

Now *ævum* is a word of the same stamp. It is the digammated form of αἶον, αἶϜον. The Latin expresses the Greek diphthong αι by *æ*, and the Greek neuter termination ον by *um*: so that, by merely taking away the digamma from *ævum* in the shape of the *v*, we have no difficulty in recovering the Greek αἶον from the Latin *ævum*.

With respect to the classical sense of *ævum* in Latin; it is certainly used as synonymous with eternity; as Tempus..... immensum, (so Censorinus defines it [e],) sine origine sine fine, quod eodem modo semper fuit et semper futurum est. Ævum, observes Servius [f], proprie æternitatis est.—Ævum est ætas perpetua, cujus neque initium neque extremum nascitur [g]. A definition repeated by Isidore [h]: Ævum est ætas perpetua cujus neque initium neque extremitas nascitur: quod Græci αἰῶνας vocant. And therefore according to Varro [i] even *ævum*

[e] De Die Natali, xvi.

[f] Ad Æneid. vi. 764.

[g] Ibid. vii. 776.

[h] Origg. v. 38. 42. B.

[i] De Lingua Lat. v. p. 54. Manilius Astron. i. 530:

Deus est qui non mutatur in ævo.

iv. 821:

Scilicet immenso nihil est æquale sub ævo.

Claudian, xxii. De Laudibus Stilichonis, ii. 424:

Est ignota procul nostræque inpervia menti,
Vix adeunda deis, annorum squallida mater,
Immensi spelunca ævi, quæ tempora vasto
Suppeditat revocatque sinu. complectitur antrum
Omnia qui placido consumit numine serpens;
Perpetuumque viret squamis, caudamque reducto
Ore vorat, tacito relegens exordia lapsu.

derived its name ab ætate omnium annorum; and æternus was only per syncopen for æviternus: to neither of which explanations are we bound to subscribe *.

We much question however whether the original sense of *ævum* was the same with this notion of eternity in the abstract The Latin grammarians [k] remark a distinction in the use of this term, which opposes it to eternity in the strict metaphysical conception of that idea: viz. That, whereas eternity is duration without beginning as well as without end, *ævum* is duration without end but not without beginning. *Ævum* is time after all, only time without end; eternity is not time in any sense; having neither beginning nor end.

If this distinction is to be made between the idea of ævum and that of eternity, it is clear that ævum is capable of denoting any period or complex of time however indefinite; because all time must have had a beginning, whether it is destined to have an end or not: though in strictness all time, as opposed to duration, must be supposed to be capable of coming to an end; for time, even time which once had a beginning, yet was supposed to be incapable of ever after coming to an end, would no longer be distinguishable from duration itself. The truth then appears to be this: That the proper

* We have met with no satisfactory derivation of this word æternus in Latin. We do not hesitate to reject that of Varro, from æviternus. To judge from the analogy of other words of like termination, pater-nus, mater-nus, frater-nus, ver-nus, acer-nus, inter-nus, exter-nus, super-nus, infer-nus, æternus must be derivable from *æter*. But what is *æter* in Latin? and where does such a word occur? We freely confess we cannot tell. We will observe only, that many words are common to the Latin and to other European languages; only that in the former they have assumed a Latin dress, in the latter they have retained their original simplicity. Could we assume that the French verb *étre*, to be, was one of these, we should want nothing else to explain the origin of æternus. For être in Latin would become æter-nus at once. And what is eternity itself, but the simple idea of *being*, without end?

We suspect too that the root of æternus, whatsoever it was, enters also in Latin into the adverb *semper*. Semper is per syncopen for *sempiter*: and sempiter is recoverable from sempiternus, still in use. To derive sempiternus from semper and æternus would be absurd: since it would imply a distinction which could not possibly exist, between *eternal*, and *always eternal*.

[k] Forcellinus in voce.

meaning of this word *ævum* in Latin, or *αἶον* in Greek, was originally that of a certain complex of duration, sufficiently great to differ from the ordinary notion and ordinary measures of time; yet still finite in some manner or other. The Greek *αἰὼν* therefore, if derived from *αἶον* in the same manner, and according to the same analogy, as other words under similar circumstances, should carry along with it this common idea of a complex of duration, both greater than usual in itself, and indefinitely repeated and enlarged also. It must still signify time in contradistinction to eternity; yet time approaching within any conceivable limits of everlasting itself. Our minds are so constituted at present, that they cannot take in such vast and illimitable ideas as infinite space or infinite duration in their simple form; but only by means of comparison and approximation. We can comprehend any finite measure either of space or of duration; and we can conceive any finite measure of either kind, howsoever great, to be indefinitely repeated and multiplied: and so we can approach nearer and nearer, and as it were by successive steps, to the simple idea of infinity itself. We can compare an inch of space with a foot, a foot with a yard, a yard with a mile, a mile with a geographical degree, a geographical degree with the circumference of the earth. We can measure the distance of the sun from the earth in terms of the diameter of the earth itself. We can form some idea of the volume or mass of the ocean, from comparison with that of the rivers which are perpetually flowing into it. We can collect days into months, months into years, years into cycles, cycles into periods; and we can repeat periods over and over again, until the powers of number itself seem to fail us, while the capacity of our minds to take in the greatest sum of this kind at once, to double or treble it, to increase it in any proportion and still to comprehend it, remains the same as ever. They sink under nothing but the simple and naked apprehension of infinity or of eternity itself.

Such then it appears to us is the proper notion of *αἰὼν*, as derived from *αἶον* or ævum: a collection of periods, of segments or integral portions of duration, finite of necessity in themselves, but of more than ordinary magnitude—yet indefinitely repeated, multiplied, and extended—capable at

least of being so to any extent. And as even in an order or series of this kind there must still be a distinction of first and second; (in other words, since such a succession must necessarily have had a beginning, whether it can ever come to an end or not;) it is manifest that the strict metaphysical idea of the Latin *ævum* itself must be very much the same with this of the Greek *αἰών*: so much so that, as some grammarians have been of opinion, the Latin *ævum* might be only the Greek *αἰὼν* after all. But to derive the Latin *ævum* from the Greek *αἰὼν* offends against analogy. The Greek termination *ων* is not expressed in Latin by *um* but by *on* or even by *o*: as in the proper names, *Ξενοφῶν, Κτησιφῶν, Μέτων, Κλέων*, it is Xenophon, Ctesiphon, Meton, Cleon; in *Πλάτων, Θράσων, Μάθων*, is is Plato, Thraso, Matho.

### SECTION III.—*Scriptural idiom in the use of αἰών.* *First and most general use of αἰών.*

The first and most proper as well as most comprehensive use of this word in Scripture will be best collected from its own testimony, contained in the following passages, which we have purposely brought together; the meaning of the phrase being the same in each, the phraseology, or form of the phrase only, differing in different instances.

#### I. *Εἰς τὸν αἰῶνα.*

i. Matthew xxi. 19.

*Καὶ λέγει αὐτῇ, Μηκέτι ἐκ σοῦ καρπὸς γένηται εἰς τὸν αἰῶνα.*

Mark xi. 14.

*Καὶ ἀποκριθεὶς ὁ Ἰησοῦς εἶπεν αὐτῇ· Μηκέτι ἐκ σοῦ εἰς τὸν αἰῶνα μηδεὶς καρπὸν φάγοι.*

ii. Mark iii. 29.

*Ὃς δ' ἂν βλασφημήσῃ εἰς τὸ Πνεῦμα τὸ ἅγιον οὐκ ἔχει ἄφεσιν εἰς τὸν αἰῶνα.*

iii. Luke i. 55.

*Τῷ Ἀβραὰμ καὶ τῷ σπέρματι αὐτοῦ εἰς τὸν αἰῶνα.*

iv. John iv. 14.

*Ὃς δ' ἂν πίῃ ἐκ τοῦ ὕδατος οὗ ἐγὼ δώσω αὐτῷ οὐ μὴ διψήσῃ εἰς τὸν αἰῶνα.*

v. John vi. 51.

*Ἐάν τις φάγῃ ἐκ τούτου τοῦ ἄρτου ζήσεται εἰς τὸν αἰῶνα.*

vi. John vi. 68.

*Ὁ τρώγων τοῦτον τὸν ἄρτον ζήσεται εἰς τὸν αἰῶνα.*

vii. John viii. 35.

*Ὁ δὲ δοῦλος οὐ μένει ἐν τῇ οἰκίᾳ εἰς τὸν αἰῶνα· ὁ υἱὸς μένει εἰς τὸν αἰῶνα.*

viii. John viii. 51.

*Ἀμὴν ἀμὴν λέγω ὑμῖν, Ἐάν τις τὸν λόγον τὸν ἐμὸν τηρήσῃ, θάνατον οὐ μὴ θεωρήσῃ εἰς τὸν αἰῶνα.*

ix. John viii. 52.

*Εἶπον οὖν αὐτῷ οἱ Ἰουδαῖοι ... ἐάν τις τὸν λόγον μου τηρήσῃ, οὐ μὴ γεύσεται θανάτου εἰς τὸν αἰῶνα.*

x. John x. 28.

*Κἀγὼ ζωὴν αἰώνιον δίδωμι αὐτοῖς, καὶ οὐ μὴ ἀπόλωνται εἰς τὸν αἰῶνα.*

xi. John xi. 26.

*Καὶ πᾶς ὁ ζῶν καὶ πιστεύων εἰς ἐμὲ οὐ μὴ ἀποθάνῃ εἰς τὸν αἰῶνα.*

xii. John xii. 34.

*Ἀπεκρίθη αὐτῷ ὁ ὄχλος· Ἡμεῖς ἠκούσαμεν ἐκ τοῦ νόμου ὅτι ὁ Χριστὸς μένει εἰς τὸν αἰῶνα.*

xiii. John xiii. 8.

*Λέγει αὐτῷ Πέτρος· Οὐ μὴ νίψῃς τοὺς πόδας μου εἰς τὸν αἰῶνα.*

xiv. John xiv. 16.

*Καὶ ἐγὼ ἐρωτήσω τὸν Πατέρα, καὶ ἄλλον Παράκλητον δώσει ὑμῖν, ἵνα μένῃ μεθ᾽ ὑμῶν εἰς τὸν αἰῶνα.*

xv. 1 Cor. viii. 13.

*Διόπερ εἰ βρῶμα σκανδαλίζει τὸν ἀδελφόν μου, οὐ μὴ φάγω κρέα εἰς τὸν αἰῶνα.*

xvi. Hebrews vi. 20.

*Ὅπου πρόδρομος ὑπὲρ ἡμῶν εἰσῆλθεν Ἰησοῦς κατὰ τὴν τάξιν Μελχισεδὲκ ἀρχιερεὺς γενόμενος εἰς τὸν αἰῶνα.*

xvii. Hebrews vii. 24.

*Ὁ δὲ, διὰ τὸ μένειν αὐτὸν εἰς τὸν αἰῶνα, ἀπαράβατον ἔχει τὴν ἱερωσύνην.*

xviii. Hebrews vii. 28.

*Ὁ νόμος γὰρ ἀνθρώπους καθίστησιν ἀρχιερεῖς ἔχοντας ἀσθένειαν· ὁ λόγος δὲ τῆς ὁρκωμοσίας τῆς μετὰ τὸν νόμον υἱὸν εἰς τὸν αἰῶνα τετελειωμένον.*

xix. 1 Peter i. 23.

*Ἀναγεγεννημένοι οὐκ ἐκ σπορᾶς φθαρτῆς ἀλλὰ ἀφθάρτου, διὰ λόγου ζῶντος Θεοῦ καὶ μένοντος εἰς τὸν αἰῶνα.*

xx. 1 Pet. i. 25.

*Τὸ δὲ ῥῆμα Κυρίου μένει εἰς τὸν αἰῶνα.*

xxi. 2 Peter ii. 17.

*Οἷς ὁ ζόφος τοῦ σκότους εἰς αἰῶνα τετήρηται.*

Jude 13.

*Ἀστέρες πλανῆται, οἷς ὁ ζόφος τοῦ σκότους εἰς τὸν αἰῶνα τετήρηται.*

xxii. 1 John ii. 17.

*Καὶ ὁ κόσμος παράγεται καὶ ἡ ἐπιθυμία αὐτοῦ· ὁ δὲ ποιῶν τὸ θέλημα τοῦ Θεοῦ μένει εἰς τὸν αἰῶνα.*

xxiii. 2 John 2.

*Διὰ τὴν ἀλήθειαν τὴν μένουσαν ἐν ἡμῖν, καὶ μεθ' ἡμῶν ἔσται εἰς τὸν αἰῶνα.*

---

## II. Εἰς τοὺς αἰῶνας.

i. Matthew vi. 13.

*Ὅτι σοῦ ἐστιν ἡ βασιλεία καὶ ἡ δύναμις καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.*

ii. Luke i. 33.

*Καὶ βασιλεύσει ἐπὶ τὸν οἶκον Ἰακὼβ εἰς τοὺς αἰῶνας, καὶ τῆς βασιλείας αὐτοῦ οὐκ ἔσται τέλος.*

iii. Romans i. 25.

*Καὶ ἐσεβάσθησαν καὶ ἐλάτρευσαν τῇ κτίσει παρὰ τὸν κτίσαντα, ὅς ἐστιν εὐλογητὸς εἰς τοὺς αἰῶνας. ἀμήν.*

iv. Romans ix. 5.

*Ὧν οἱ πατέρες, καὶ ἐξ ὧν ὁ Χριστὸς τὸ κατὰ σάρκα, ὁ ὢν ἐπὶ πάντων, Θεὸς εὐλογητὸς εἰς τοὺς αἰῶνας. ἀμήν.*

v. Romans xi. 36.

*Ὅτι ἐξ αὐτοῦ καὶ δι' αὐτοῦ καὶ εἰς αὐτὸν τὰ πάντα· αὐτῷ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.*

vi. Romans xvi. 27.

*Μόνῳ σοφῷ Θεῷ διὰ Ἰησοῦ Χριστοῦ, ᾧ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.*

vii. 2 Cor. xi. 31.

*Ὁ Θεὸς καὶ πατὴρ τοῦ Κυρίου ἡμῶν Ἰησοῦ Χριστοῦ οἶδεν (ὁ ὢν εὐλογητὸς εἰς τοὺς αἰῶνας) ὅτι οὐ ψεύδομαι.*

viii. Hebrews xiii. 8.

*Ἰησοῦς Χριστὸς χθὲς καὶ σήμερον ὁ αὐτὸς καὶ εἰς τοὺς αἰῶνας.*

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## III. *Εἰς τοὺς αἰῶνας τῶν αἰώνων.*

i. Galatians i. 5.

*Κατὰ τὸ θέλημα τοῦ Θεοῦ καὶ πατρὸς ἡμῶν· ᾧ ἡ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

ii. Philippians iv. 20.

*Τῷ δὲ Θεῷ καὶ πατρὶ ἡμῶν ἡ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

iii. 1 Timothy i. 17.

*Μόνῳ σοφῷ Θεῷ τιμὴ καὶ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

iv. 2 Timothy iv. 18.

*Καὶ ῥύσεταί με ὁ Κύριος ... ᾧ ἡ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

v. Hebrews xiii. 21.

*Ποιῶν ἐν ὑμῖν τὸ εὐάρεστον ἐνώπιον αὐτοῦ, διὰ Ἰησοῦ Χριστοῦ, ᾧ ἡ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

vi. 1 Peter iv. 11.

*Ἵνα ἐν πᾶσι δοξάζηται ὁ Θεὸς διὰ Ἰησοῦ Χριστοῦ, ᾧ ἐστὶν ἡ δόξα καὶ τὸ κράτος εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

vii. 1 Peter v. 10, 11.

*Ὁ δὲ Θεὸς ... αὐτῷ ἡ δόξα καὶ τὸ κράτος εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

---

## IV. Εἰς τὰς γενεὰς τοῦ αἰῶνος τῶν αἰώνων.

Ephesians iii. 20, 21.

*Τῷ δὲ δυναμένῳ ὑπὲρ πάντα ποιῆσαι ... αὐτῷ ἡ δόξα ἐν τῇ ἐκκλησίᾳ ἐν Χριστῷ Ἰησοῦ εἰς πάσας τὰς γενεὰς τοῦ αἰῶνος τῶν αἰώνων. ἀμήν.*

---

## V. Εἰς ἡμέραν τοῦ αἰῶνος.

2 Peter iii. 18.

*Αὐξάνετε δὲ ἐν χάριτι καὶ γνώσει τοῦ Κυρίου ἡμῶν καὶ σωτῆρος Ἰησοῦ Χριστοῦ. αὐτῷ ἡ δόξα καὶ νῦν καὶ εἰς ἡμέραν τοῦ αἰῶνος. ἀμήν.*

---

## VI. Εἰς πάντας τοὺς αἰῶνας.

Jude 25.

*Καὶ νῦν καὶ εἰς πάντας τοὺς αἰῶνας*[1].

### Section IV.—*Observations on the preceding texts.*

There cannot be any doubt that the general idea, intended to be conveyed in all these instances whether of the same or of a different form of expression, is that of time without end; and properly of time to come; of eternity *a parte ante:* and as this is also the meaning of our own vernacular and idiomatic phrase of *for ever*, or *for ever and ever*, there can be no question that the Greek phrase in each of these instances is very properly and adequately rendered by the English one of *for ever*.

It is evident too that, in the enunciations of this phrase, *εἰς αἰῶνα* or *εἰς τὸν αἰῶνα*, the presence or the absence of the Greek article makes no difference to the sense: of which 2 Pet. ii. 17 and Jude 13 (No. xxi) are a plain proof; the

[1] Cf. Apocalypsis, i. 6. 18: iv. 9, 10: v. 13, 14: vii. 12: x. 6: xi. 15: xiv. 11: xv. 7: xix. 3: xx. 10: xxii. 5.

latter being a quotation of the former, yet having *εἰς τὸν αἰῶνα* where the former has *εἰς αἰῶνα.*

It is manifest also that it makes no difference to the real meaning of the phrase, in whichsoever of these forms it runs; whether that of *εἰς αἰῶνα* or that of *εἰς τὸν αἰῶνα* or that of *εἰς τοὺς αἰῶνας* or that of *εἰς τοὺς αἰῶνας τῶν αἰώνων.* It is only more solemnly and more emphatically expressed in the latter of these forms of enunciation; but time or duration without end, time which should never come to an end however long it might last, is the thing intended in them all; and therefore one and the same in them all: for it is of the nature of such an idea to exclude degrees of comparison, and to be incapable of more or less. Time without end is the same thing of whatsoever and howsoever it may be predicated.

Yet among these different modes of expressing the same simple idea of duration thus unterminated; if some may be specified as more remarkable than the rest, one such would be that of Ephesians iii. 21: *Εἰς πάσας τὰς γενεὰς τοῦ αἰῶνος τῶν αἰώνων*: and another that of 2 Pet. iii. 18: *Καὶ νῦν καὶ εἰς ἡμέραν τοῦ αἰῶνος.* The former appears to us to involve an esoteric doctrine, of which we may have occasion to say something hereafter. The latter seems to oppose the course and succession of time without end still to come, to time present and passing, as one day to the present moment; and to represent eternity itself a *parte ante* as one day. And this is so different from the idea of eternity, whether as past or as future, which would naturally occur to the mere human apprehension of such an idea; that we could scarcely desire a stronger proof than the use of such language that St. Peter must have spoken in this instance as the Spirit gave him utterance. It is conceivable, (or rather it is metaphysically certain,) that to the Divine apprehension infinite duration must appear as one moment[m]; infinite space as one point: but to what finite understanding could it possibly present itself in such a point of view? What human comprehension could thus reduce infinitude to a span and eternity to a day*?

* The phrase *ἡμέραι αἰῶνος* or *τοῦ αἰῶνος* occurs in the Old Testament in the sense of days of old: Deut. xxxii. 7: Amos ix. 11: Isaiah lxiii. 9:

m Ps. xc. 4. 2 Pet. iii. 8.

Lastly, it will no doubt occur to the reader that these phrases, *εἰς τὸν αἰῶνα* and the like, are not confined to the New Testament. The same phrases occur in the Old, especially in the Septuagint; as the Greek versions of certain corresponding phrases in the Hebrew. There are in fact three cases of this kind, which the New Testament itself has quoted from the Old; none of which having been yet adduced, we subjoin them here.

## I. Εἰς τὸν αἰῶνα.

### i. Hebrews v. 6. Psalm cx. 4.

*Καθὼς καὶ ἐν ἑτέρῳ λέγει· Σὺ ἱερεὺς εἰς τὸν αἰῶνα κατὰ τὴν τάξιν Μελχισεδέκ.*

Hebrews vii. 17.

*Μαρτυρεῖ γὰρ ὅτι Σὺ ἱερεὺς εἰς τὸν αἰῶνα κατὰ τὴν τάξιν Μελχισεδέκ.*

Hebrews vii. 21.

*Διὰ τοῦ λέγοντος πρὸς αὐτόν· Ὤμοσε Κύριος καὶ οὐ μεταμεληθήσεται· Σὺ ἱερεὺς εἰς τὸν αἰῶνα κατὰ τὴν τάξιν Μελχισεδέκ.*

### ii. 2 Cor. ix. 9. Psalm cxii. 9.

*Καθὼς γέγραπται· Ἐσκόρπισεν· ἔδωκε τοῖς πένησιν· ἡ δικαιοσύνη αὐτοῦ μένει εἰς τὸν αἰῶνα.*

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## II. Εἰς τὸν αἰῶνα τοῦ αἰῶνος.

### Hebrews i. 8. Psalm xlv. 6. (in the Hebr. ver. 8.)

*Πρὸς δὲ τὸν υἱόν· Ὁ θρόνος σοῦ, ὁ Θεὸς, εἰς τὸν αἰῶνα τοῦ αἰῶνος.*

The Hebrew phrase in the first and third of these instances is *laoulam,* or *oulam:* from which we may infer that *laoulam*

Micah v. 2; vii. 14: Malachi iii. 4: though not in the sense of eternity. *Ἡμέρα αἰῶνος* however does not occur even there.

Philo Judæus, commenting on Deut. iv. 4, or v. 3, "are alive this day," labours to prove that eternity itself is only *one* endless day, one continued *σήμερον*, one everlasting *νῦν*: *Σήμερον δ' ἔστιν ὁ ἀπέρατος καὶ ἀδιεξίτητος αἰών. μηνῶν γὰρ, καὶ ἐνιαυτῶν, καὶ συνόλως χρόνων, περίοδοι δόγματα ἀνθρώπων εἰσὶν ἀριθμὸν ἐκτετιμηκότων. τὸ δ' ἀψευδὲς ὄνομα αἰῶνος ἡ σήμερον.* i. 554. 32. De Profugis.

in the Hebrew, and *εἰς αἰῶνα* or *εἰς τὸν αἰῶνα* in Greek, mean the same thing. The two phrases consequently being altogether parallel one to the other; we have no occasion, for the sake of illustrating the use of this phrase in the New Testament, to enter on the consideration of the places in which it occurs in the Old; though those are more numerous, and are expressed in a greater variety of ways, than in the New *.

* This phrase, as we have observed, occurs much more frequently and in a much greater variety of forms in the Septuagint version of the Old Testament than in the Greek of the New. It would be an endless labour to quote particular instances; but we may give, from the Concordance of Trommius, a digest or synopsis of them as follows:

i. Αἰὼν, ὁ αἰών: *Sæculum, ævum, æternitas:* once as the version of *aad* in the Hebrew, (Isaiah lvii. 15.): thirteen times as that of *aoulam:* twice as that of *la-oulam:* twice as that of *aoulamim* (plural of *aoulam:* and once as that of *aoulamim* in the sense of *secret sins.* (Ps. xc. 8.)

ii. Ἀπὸ τοῦ αἰῶνος· ἀπ' αἰῶνος: eight times as the version of *maoulam:* twice as that of *menheaoulam.*

iii. Δι' αἰῶνος: once as the version of *aoulam:* twice as that of *laoulam:* once as that of *aad aoulam.*

iv. Εἰς τὸν αἰῶνα: once for *aeeroun, ultimus,* (Isaiah xlviii. 12.): twice for *la noutsee:* once for *laad:* once for *aoulimim,* parvuli, (Job xix. 18.): fifteen times for *aoulam:* one hundred and forty-one times for *laoulam:* once besides in the form of *εἰς αἰῶνα,* (Ps. v. 13.): once in that of *εἰς τοὺς αἰῶνας,* (Ps. lxxi. 17.): eleven times for *aad aoulam:* once for the Chaldee *lalamin,* (Dan. v. 10.): once for *laïloum,* (2 Chron. xxxiii. 7.): once for *eekouth aoulam,* an ordinance for ever, (Lev. iii. 17.): once for *leekouth aoulam,* (Exod. xxix. 9.): once for *ari arar,* cities of cities, (Isaiah xvii. 2.): once for *laphenik, coram facie tua,* (Ps. cii. 29.)

v. Εἰς τοὺς αἰῶνας: once for *aal mouth,* usque ad mortem, (Ps. xlviii. 15.): once for *laad:* once for the Chaldee *alama,* (Dan. iv. 31.): twice for *laoulam:* thrice for *aoulamim:* once for *laoulamim,* (Ps. lxxvi. 7.) four times in Daniel for the Chaldee *laalamim:* once in the same, for *lalamia* in the Chaldee too.

vi. Ἐν τοῖς αἰῶσι: once for *laoulamim,* (Ecclesiastes i. 10.)

vii. Ἕως τοῦ αἰῶνος: ἕως αἰῶνος: once for *aïbeth aoulam, inimicitia æterna,* (Ezek. xxv. 15.): once for *aad eloum:* once for *aad noutsee:* twice for *adiaad:* once for *laoulam:* fifty times for *aad aoulam:* twice for *aad laoulam.*

viii. Ἕως εἰς τὸν αἰῶνα: twice for *aad aoulam:* twice for *laad aad aoulam.*

ix. Ἕως εἰς τοὺς αἰῶνας: once for *ouaad aoulam,* (Micah iv. 7.)

x. Πρὸ τοῦ αἰῶνος: πρὸ αἰῶνος: once for *maoulam:* once for *mekoudam.*

This idiom of the New Testament however is not to be regarded as one which it borrowed from the Old. It is an original idiom in the New Testament as much as in the Old. The books of the New Testament, all but the Gospel of St. Matthew and the Epistle to the Hebrews, were written in Greek; and even those two exist at present only in Greek, and that too in Greek of equal authority to that of the original Hebrew itself. And with respect to the phrase itself; though it could not be maintained that the form of words, so used in the Greek of the New Testament to express the idea of time without end, is classical; yet the parallel phrase of *εἰς ἀεὶ* or *εἰς τὸν ἀεὶ*, is classicaland of common occurrence in the best writers. *Αἰὼν* itself is a classical word †: and

xi. *Πρὸ τῶν αἰώνων*: once for *koudam*, (Ps. liv. 21.)
xii. *Εἰς τὸν αἰῶνα καὶ ἐπέκεινα*: once for *laoulam ouaad*, (Micah iv. 5.)
xiii. *Εἰς τὸν αἰῶνα καὶ ἔτι*: once for *laoulam ouaad*, (Dan. xii. 3.)
xiv. *Ἕως τοῦ αἰῶνος ἔτι*: once for *aad aoulamiaad*, (Isaiah xlv. 17.)
xv. *Εἰς τὸν αἰῶνα χρόνον*: once for *he laeh*: twice for *lanoutsee*: twice for *laoulam*: twice for *aad aoulam*.
xvi. *Ἀπὸ τοῦ αἰῶνος καὶ ἕως τοῦ αἰῶνος*: once, *ἀπ' αἰῶνος καὶ ἕως αἰῶνος*, *lamen aoulam ouaad aoulam*, (Jeremiah xxv. 5.): four times for *maoulam ouaad aoulam*: twice for *men aoulam ouaad aoulam*: once for *meneaoulam ouaad laoulamim*, (Ps. cv. 47.): once, (Dan. ii. 20.) for a similar Chaldaic phrase.
xvii. *Εἰς τὸν αἰῶνα τοῦ αἰῶνος*: *εἰς αἰῶνα αἰῶνος*: seven times for *laad*: three times for *aadi aad*: three times for *aoulam ouaad*: once for *laoulam*: once for *laad laoulam*.
xviii. *Ἐξ αἰῶνος καὶ ἕως αἰῶνος*: once for *men aoulam ouaad aoulam*.
xix. *Τὸν αἰῶνα, καὶ ἐπ' αἰῶνα καὶ ἔτι*: once, (Exod. xv. 18, *laoulam ouaad*.)
xx. *Ἕως αἰῶνος τῶν αἰώνων*: once, (Dan. vii. 18.)
xxi. *Εἰς τὸν αἰῶνα καὶ εἰς τὸν αἰῶνα τοῦ αἰῶνος*: three times for *aoulam ouaad*: six times for *laoulam ouaad*: once for *laad laoulam*, (Ps. cxlviii. 6.)

† The word *αἰὼν* is repeatedly met with in the most classical authors in the Greek language; though more frequently in the poets, (from Homer downwards,) than in prose writers. We have collected such instances of its occurrence as have fallen in our way; and will take the liberty of subjoining them here.

It may be premised to them all that, with respect to the gender of this noun, there is equally good authority for regarding it either as masculine or as feminine. It occurs as both in the same writer; but it seems at last to have settled down into the form of a masculine. There is no uniform rule applicable to the gender of these words in *ων*.

As to the meaning which appears to have been attached to this term,

neither Plato nor Xenophon would have scrupled to say *εἰς αἰώνιον* or *εἰς τὸν αἰώνιον χρόνον*, though they might not have

(particularly in the Greek poets,) in the majority of the instances about to be produced, and both in composition and out of composition, it will be seen to be used in the sense of *life;* that is, of *existence* as synonymous with life; and that too human life:—sometimes human life and its appointed duration in the abstract, sometimes human life with reference to a particular subject. But even in this case, the fundamental idea is that of a certain interval of duration; from which primary idea it was transferred to the term or period of human existence, as one instance of duration so bounded, the most familiar as well as the most important of all.

I. Homer.

*αἲ γὰρ δὴ ψυχῆς τε καὶ αἰῶνός σε δυναίμην*
*εὖνιν ποιήσας πέμψαι δόμον ἄϊδος εἴσω* [a].

*ἵνα μηκέτ' ὀδυρομένη κατὰ θυμὸν*
*αἰῶνα φθινύθω* [b].

*ἔνθ' ἀναπηλήσας γλυφανῷ πολιοῖο σιδήρου*
*αἰῶν' ἐξετόρησεν ὀρεσκῴοιο χελώνης* [c].

*ἐγκλίνων δ' ἐκύλινδε δι' αἰῶνός τε τορήσας* [d].

*ῥηϊδίως αἰῶνα τελεσφόρον εἰς ἐνιαυτὸν*
*εὔκηλοι διάγουσιν ἐνὶ σφετεροῖσι δόμοισιν* [e].

II. Hesiod.

*τῷ δέ τ' ἀπ' αἰῶνος κακὸν ἐσθλῷ ἀντιφερίζει* [f].

*εὖτ' ἂν δὴ Κύκνον γλυκερῆς αἰῶνος ἀμέρσῃ* [g].

*Ζεῦ πάτερ εἴθε μοι εἴθ' ἧσσω μ' αἰῶνα βίοιο*
*ὤφειλες δοῦναι* [h].

III. Simonides.

*αἰῶνι δὲ παύρῳ πόνος ἀμφὶ*
*πόνῳ* [i].

*ἢ καὶ Τίμαρχον γλυκερῆς αἰῶνος ἄμερσας*
*ἠΐθεον, πρὶν ἰδεῖν κουριδίην ἄλοχον* [k].

IV. Æschylus.

*γυνὴ γὰρ ἄνδρ' ἕκαστον αἰῶνος στερεῖ* [l].

[a] Odyss. I. 523.
[b] Σ. 202. Cf. Il. Δ. 478: E. 685: I. 415: Π. 453: P. 301: T. 27: X. 58: Ω. 725; Od. E. 152. 160: H. 224.
[c] Hymnus ad Mercurium, 41.
[d] Ibid. 119.
[e] Hymnus ad Vulcanum, 6.
[f] Theogonia, 609.
[g] Clypeus, 331.
[h] Fragm. lvi. Cf. Tzetzes ad Lycophron. 682.
[i] Poetæ Minores, xiv.
[k] Ib. xcvii.
[l] Prometheus, 862.

said *εἰς αἰῶνα* or *εἰς τὸν αἰῶνα*, meaning the same thing by that.

*αἰῶνα δ᾽ ἐς τρίτον μένει*[m].

---

*τίν᾽ ἀνδρῶν γὰρ τοσόνδ᾽ ἐθαύμασαν*
*θεοὶ καὶ ξυνέστιοι*
*πόλεος, ὅ πολύβοτός τ᾽ αἰὼν βροτῶν,*
*ὅσον τότ᾽ Οἰδίπουν ἔτιον*[n].

---

*ἰὼ δυσαίων σφὶν ἁ τεκοῦσα*[o].

---

*ἦ μακροβίστος ὅδε γέ τις*
*αἰὼν ἐφάνθη γεραιοῖς*[p].

---

*ὅς θ᾽ ἕως ἔλευσσες αὐγὰς ἡλίου ζηλωτὸς ὢν*
*βίοτον εὐαίωνα Πέρσαις ὡς θεὸς διήγαγες*[q].

---

*πεπλήγμεθ᾽, οἷαι δι᾽ αἰῶνος τύχαι*[r].

---

*ἐπωνυμίᾳ δ᾽*
*ἐπεκραίνετο μόρσιμος αἰών*[s].

---

*λαβοῦσα δ᾽ ἕρμα Δῖον ἀψευδεῖ λόγῳ*
*γείνατο παῖδ᾽ ἀμεμφῆ*
*δι᾽ αἰῶνος μακροῦ πάνολβον*[t].

---

*ἔτι γὰρ θεόθεν καταπνείει*
*πειθὼ μολπὰν*
*ἀλκὰν σύμφυτος αἰών*[u].

---

*λίτας δὲ καὶ κληδόνας πατρῴους*
*παρ᾽ οὐδὲν αἰῶνα παρθένειόν τ᾽*
*ἔθεντο φιλόμαχοι βραβῆς*[w].

---

*ἁγνὰ δ᾽ ἀταύρωτος αὐδᾷ πατρὸς*
*φίλου τριτόσπονδον εὔποτμον*
*αἰῶνα φίλως ἐτίμα*[x].

---

*παμπρόσθη πολύθρηνον*
*αἰῶν᾽ ἀμφὶ πολιτᾶν*
*μέλεον αἷμ᾽ ἀνατλᾶσα*[y].

---

*περιβάλοντό οἱ πτεροφόρον δέμας γὰρ*
*θεοί, γλυκύν τ᾽ αἰῶνα κλαυμάτων ἄτερ*[z].

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*δι᾽ αἰῶνος δ᾽ ἰυγμοῖσι βόσκεται κέαρ*[a].

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[m] Septem, 744.
[n] Ibid. 772.
[o] Ibid. 927.
[p] Persæ, 264.
[q] Ibid. 710.
[r] Ibid. 1007.
[s] Supplices, 46.
[t] Ibid. 580.
[u] Agamemnon, 105.
[w] Ibid. 227.
[x] Ibid. 244.
[y] Ibid. 714.
[z] Ibid. 1147.
[a] Choëphori, 26.

## SECTION V.—*Scriptural idiom in the use of αἰών. Specific distinctions in the general sense of αἰών.*

The specific distinctions which appear even in the general use of this term in Scripture are such as exist in the nature

μόρον κτίσαι μωμένα
ἄφερτον αἰῶνι σῷ [b].

ἀσινὴς δ' αἰῶνα διοιχνεῖ [c].

V. SOPHOCLES.

ἂν οὔπω τις ἔθρεψεν
αἰὼν Αἰακιδᾶν, ἄτερθε τοῦδε [d].

παντσύρτῳ παμμήνῳ δεινῶν
στυγνῶν τ' ἀχέων αἰῶνι [e].

ἄσκει τοιαύτη νοῦν δι' αἰῶνος μένειν [f].

ὡς καὶ σὺ πάγκλαυτον αἰῶνα κοινὸν εἵλου [g].

οὔτοι βίου μοι τοῦ μακραίωνος πόθος [h].

τίς σ' ἔτικτε
τῶν μακραιώνων ἄρα κ', τ. λ. [i]

ἀλαῶν ὀμμάτων
ἆρα καὶ ἦσθα φυτάλμιος δυσαίων
μακραίων γ' ὅσ' ἐπεικάσαι [k].

ποῖ δῆτ'
αὖθις ὧδ' ἔρημος ἄπορος
αἰῶνα τλάμον' ἕξω [l];

ἀλλὰ κἀπ' ἐκείνᾳ
μοῖραι μακραίωνες ἔσχον ὦ παῖ [m].

λόγος μέν ἐστ' ἀρχαῖος ἀνθρώπων φανεὶς,
ὡς οὐκ ἂν αἰῶν' ἐκμάθοις βροτῶν πρὶν ἂν
θάνῃ τις, οὔτ' εἰ χρηστὸς οὔτ' εἴ τῳ κακός [n].

τοιοῦτος αἰὼν εἰς δόμους τε κἀκ δόμων
ἀεὶ τὸν ἄνδρ' ἔπεμπε [o].

τὸ λοιπὸν ἤδη βίοτον εὐαίων' ἔχειν [p].

b Choëph. 441.
c Eumenides, 315.
d Ajax, 644.
e Electra, 851.
f Ibid. 1024.
g Ibid. 1085.
h Œdipus Rex, 518.
i Ibid. 1098.
k Œdipus Col. 149.
l Ibid. 1734.
m Antigone, 986.
n Trachiniæ, 1.
o Ibid. 34.
p Ibid. 81.

of things. The simple idea of duration, which has neither beginning nor end, is incapable of distinctions or modifica-

ὦ δύστανα γένη βροτῶν
οἷς μὴ μέτριος αἰών [q].

εὐαίων εὐαίων ἄναξ [r].

ὦ στυγνὸς αἰὼν τί με τί δῆτ' ἔχεις ἄνω [s];

VI. Pindar.

αἰών τ' ἔφε-
πε μόρσιμος [t].

ἄδακρυν νέμονται
αἰῶνα [u].

μήτινα λειπόμενον
τὸν ἀκίνδυνον παρὰ ματρὶ μένειν
αἰῶνα πέσσοντ' [w].

σύ τοί νιν κλυτᾶς
αἰῶνος ἄκραν βαθμίδων
ἄπο ξὺν εὐδοξίᾳ
μετανίσσεαι [x].

λαμπρὸν ἔπεστι φέγγος ἀνδρῶν
καὶ μείλιχος αἰών [y].

εἴπερ καθ' ὁδόν νιν εὐθύπομπος αἰὼν
ταῖς μεγάλαις δέδωκεν
κόσμον 'Αθάναις [z].

ἐλᾷ δὲ καὶ τέσ-
σαρας ἀρετὰς ὁ μακρὸς αἰών [a].

τελέθει
πρὸς γῆρας αἰὼν ἁμέρα [b].

ἐπεὶ
τοῦτον ἢ πάμπαν θεὸς ἔμ-
μεναι οἰκεῖν τ' οὐρανῷ
εἷλετ' αἰῶνα φθιμένου Πολυδεύκης
Κάστορος ἐν πολέμῳ [c].

γῆρας ἔς τε τὸν μόρσιμον
αἰῶνα [d].

q Philoctetes, 178.
r Ibid. 829.
s Ibid. 1348.
t Olymp. ii. 18.
u Ibid. 120.
w Pythia, iv. 329.
x Ibid. v. 7.
y Ibid. viii. 138.
z Nemea, ii. 10.
a Ibid. iii. 129.
b Ibid. ix. 105.
c Ibid. x. 107.
d Isthmia, vii. 58.

tions; and if it excludes the possibility of a sum total or complex, it must exclude also the idea of subdivisions or

*δόλιος γὰρ αἰὼν*
*ἐπ' ἀνδράσι κρέμαται* [e].

---

*πολύ τοι*
*φέρτιστον ἀνδρὶ τερπνὸς αἰών* [f].

### VII. Euripides.

*ζηλωτὸς αἰών* [g].

---

*τὸν ἀμηχανίας ἔχουσα δυσπέρατον αἰῶν'* [h].

---

*μετὰ δ' ἵσταται ἀνδράσιν αἰὼν*
*πολυπλάνητος ἀεί* [i].

---

*οἴσω δὲ πένθος οὐκ ἐτήσιον τὸ σὸν,*
*ἀλλ' ἔς τ' ἂν αἰὼν οὑμὸς ἀντέχῃ γύναι* [k].

---

*ἦ γὰρ ἐμοί γ' ἄλυπος*
*δι' αἰῶνος ἂν ξυνείη* [l].

---

*δυσαίων δ' ὁ βίος* [m].

---

*ἐς Ἀΐδαν καταλύσουσ'*
*ἔμμοχθον*
*βίοτον αἰῶνός τε πόνους* [n].

---

*αἰῶνα δ' οὐκ ἔξεστιν* [o] (*ἐξορθώσασθαι*)
To live life over again.

---

*ὦ παιὰν ὦ παιὰν*
*εὐαίων εὐαίων*
*εἴης ὦ Λητοῦς παῖ* [p].

---

*τίς εὐτυχὴς*
*ὅστις δεδοικὼς καὶ περιβλέπων βίαν*
*αἰῶνα τείνει* [q];

---

*αἰὼν δυσαίων τις ἔλαχεν ἔλαχεν* [r].

---

*τίν' αἰῶν' εἰς τὸ λοιπὸν ἕξεις* [s];

---

*ἀλλ' εἱλισσόμενός τις αἰ-*
*ὼν πλοῦτον μόνον αὔξει* [t].

---

[e] Isthmia, viii. 27.
[f] Fragmenta, Epinicia, iii.
[g] Medea, 243. [h] Ibid. 645.
[i] Hippolytus, 1109.
[k] Alcestis, 336. [l] Ibid. 474.
[m] Supplices, 960.
[n] Ibid. 1003.
[o] Ibid. 1084.
[p] Ion, 141. [q] Ibid. 623.
[r] Helene, 213.
[s] Andromache, 1215.
[t] Hercules Furens, 671.

parts. But in the popular apprehension of these two things duration itself is commonly identified with time; and time is

λιποῦσ' αἰ-
ὧνα κεραυνίῳ πλαγᾷ[u].

---

βραχὺς αἰών[w]. Vita brevis.

---

κατὰ φάος νύκτας τε φίλας
εὐαίωνα διαζῆν[x].

---

μῶν ἐλεύθερον
αἰῶνα θέσθαι[y];

---

αἰῶνα τὸν ξύμπαντα δουλεῦσαι θέλω[z].

---

μονάδ' αἰ-
ὧνα διάξουσα[a].

---

σὸν αἰῶνα μέλεον[b].

---

γάμοι δ' ὅσοις μὲν εὖ καθεστᾶσιν βρο
μακάριος αἰών[c].

---

βροτῶν δ' ὁ πᾶς ἀστάθμητος αἰών[d].

---

τὸ δὲ μετ' εὐτυχίας κακοῦ-
σθαι θνατοῖς βαρὺς αἰών[e].

---

τὸ μὲν ἐπ' εὐαίωνι πότμῳ[f].

---

ἕτερον ἕτερον αἰ-
ὧνα καὶ μοῖραν οἰκήσομεν[g].

---

ὁ δ' ἡδὺς αἰὼν ἡ κακή τ' ἀτολμία
οὔτ' οἶκον οὔτε βίοτον οὐδὲν ὠφελεῖ[h].

## VIII. Herodotus.

Ἐκεῖνο δὲ τὸ εἴρεό με οὔκω σε ἐγὼ λέγω, πρὶν ἂν τελευτήσαντα καλῶς τὸν αἰῶνα πύθωμαι[i]—Καὶ οὕτω διαφέρειν τὸν αἰῶνα ἐναλλὰξ πρήσσων, ἢ εὐτυχέειν τὰ πάντα[k]—Ὁ δὲ θεὸς γλυκὺν γεύσας τὸν αἰῶνα φθονερὸς ἐν αὐτῷ εὑρίσκεται ἐών[l]—Κρέσσον γὰρ ποιεῦντάς τι καὶ ἀμυνομένους τελευτῆσαι τὸν αἰῶνα, ἤπερ παρέχοντας διαφθαρῆναι αἰσχίστῳ μόρῳ[m]—Τοῦτο δὲ Ἀργείους τοὺς μετὰ Πολυνείκεος ἐπὶ Θήβας ἐλάσαντας τελευτήσαντας τὸν αἰῶνα . . . θάψαι[n].

There are however passages even in the poets, in which the word has its

u Bacchæ, 92.
w Ibid. 395. x Ibid. 425.
y Hecuba, 754. z Ibid. 757.
a Phœnissæ, 1520. b Ibid. 1533.
c Orestes, 602. d Ibid. 981.
e Iphigenia in Tauris, 1121.
f In Aulide, 551.
g Ibid. 1507.
h Fragmenta, Ἐρεχθεὺς, ix.
i i. 32. k iii. 40.
l vii. 46. m ix. 17.
n Ibid. 27.

a proper subject of division; time admits of modifications and distinctions; time may be regarded either as past, or as

proper and legitimate meaning of eternity, or for ever; of existence, duration, life without end.

It occurs, in the sense of existence continuing for more than one life at least, in the following of Æschylus:

αἰῶνα δ' ἐς τρίτον μένει[o].

And in its proper sense, in the following passages:—

i. καὶ τότε δὴ τίς ἦν ὁ θέλξας πολύπλαγκτον ἀθλίαν
οἰστροδόνητον Ἰώ;
Ζεὺς αἰῶνος κρέων ἀπαύστου[p].

ii. δι' αἰῶνος δὲ τὸν πρὶν ὄλβον
ἕρματι προσβαλὼν δίκας ὤλετ' ἄκλαυστος ἄϊστος[q].

iii. καὶ
σῶμα μὲν πάντων ἕπεται
θανάτῳ περισθενεῖ, ζῶν
δὲ λείπεται αἰῶνος εἴδωλον·
τὸ γὰρ μόνον ἐστὶν ἐκ θεῶν[r].
"The soul, the spirit, the image or likeness of eternity."

iv. ἰσόδενδρον τέκμαρ αἰῶνος λαχοῦσα[s].

v. μακρὸς δ' αἰὼν ἔχει
πολλὰ μὲν ἁμετέραν ἀνδρῶν τε μοῖραν εἰπεῖν[t].

vi. κόραι γὰρ ἄζυγες, γάμων πάρος,
κόμας κεροῦνταί σοι, δι' αἰῶνος μακροῦ
πένθη μέγιστα δακρύων καρπουμένῳ[u].

vii. πολλὰ γὰρ τίκτει
μοῖρα τελεσσιδώτειρ'
αἰών τε Κρόνου παῖς[w].

viii. ἄμναστοι δὲ τὰ πολλὰ καὶ ὄλβια τῆνα λιπόντες
δειλοῖς ἐν νεκύεσσι μακροὺς αἰῶνας ἔκειντο[x].

ix. αἰῶνος Κρόνε παγγενέτωρ[y].

[o] Septem, 744.
[p] Supplices, 571.
[q] Eumenides, 564.
[r] Pindar, Fragm. Thren. ii. Apud Plutarchum, Consolatio ad Apollonium, cap. xxxv.
[s] Fragmenta Incerta, ci. Compare Isaiah lxv. 22. "As the days of a tree are the days of my people:" Pindar had probably the Φοῖνιξ or palm tree in view in this comparison. Cf. Psalm xcii. 12.
[t] Euripides, Medea, 427.
[u] Hippolytus, 1425.
[w] Heraclidæ, 898.
[x] Theocritus, Idyll. xvi. 42.
[y] Orpheus, Hymni, xiii. Κρόνου, verse 5.

present, or as future; and time will still retain its proper nature whereby it is both allied to and distinguished from

*οἷον καὶ παρ' Ὀρφεῖ τὰ τῆς φύσεως ἔργα κλυτὰ προσαγορεύονται·*
*καὶ φύσεως κλυτὰ ἔργα μένει καὶ ἀπείριτος αἰών*[z].

---

Timæus Locrus[zz]: Χρόνω δὲ τὰ μέρεα τάσδε τὰς περιόδως λέγοντι ἃς ἐκόσμησεν ὁ θεὸς σὺν κόσμῳ. οὐ γὰρ ἦν πρὸ κόσμω ἄστρα· διόπερ οὐδ' ἐνιαυτός· οὐδ' ὡρᾶν περίοδοι αἷς μετρέεται ὁ γεννατὸς κόσμος οὗτος. εἰκὼν δέ ἐστι τῶ ἀγεννάτω χρόνω ὃν αἰῶνα ποταγορεύομες. ὡς γὰρ ποτ' ἀΐδιον παράδειγμα τὸν ἰδανικὸν κόσμον ὅδε ὠρανὸς ἐγεννάθη, οὕτως ὡς πρὸς παράδειγμα τὸν αἰῶνα ὅδε χρόνος σὺν κόσμῳ ἐδαμιουργήθη.

The philosophical idea of *αἰὼν* appears to have been that of eternity, or duration *ἄπειρος* at each end, without beginning and without termination. Time was measurable; *αἰὼν*, in this sense, was not. Time could be judged of by the senses: *αἰὼν* could be comprehended by the intellect only: Οὐ γάρ ἐστιν ἡ αὐτὴ ἀϊδιότης κατὰ τὸν αἰῶνα καὶ τὸν ὅλον χρόνον· οὐδὲ γὰρ ἡ αὐτὴ ἀπειρία χρόνου καὶ αἰῶνος· οὐδὲ γὰρ ταὐτὸν αἰὼν καὶ χρόνος[a]— Ὁ δὲ αἰὼν δύναμις ἄπειρος[b] — Καὶ γὰρ αὐτὸς (Aristotle) διακρίνει τὸν αἰῶνα καὶ τὸν χρόνον, καὶ τὸν μὲν ἀπονέμει τῷ νῷ τὸν δὲ τῷ οὐρανῷ καὶ τῇ κινήσει τοῦ οὐρανοῦ[c]—Θέμενος δ' οὖν τὸν ἀριθμὸν τῆς κινήσεως εἶναι τὸν χρόνον τὸν αἰῶνα νοητὸν εἶναί φησι καὶ αὐτὸς, ἀπὸ τοῦ ἀεὶ εἶναι τὴν ἐπωνυμίαν εἰληφότα, ἔχοντά τε καὶ περιέχοντα τὸν ἅπαντα χρόνον[d].

No one is bound to subscribe to this definition of the term, *ἀπὸ τοῦ ἀεὶ εἶναι*, though proposed on the authority of Aristotle: no more than to another dogma of the philosophers of old, that *αἰὼν* was a person: Καὶ ὁ αἰὼν ὅς ἐστι πρῶτος ἀεὶ ὢν[e]—Διὸ καὶ ὁ αἰὼν ὂν ὢν καὶ τὶ ὂν ὁ αἰών[f]: which person Proclus labours to prove was the *αὐτοζῶον* of Plato, and the Phanes of Orpheus, born of the cosmogonic egg—of whom Orpheus himself sings thus[g]:

πρωτόγονον καλέω διφυῆ μέγαν αἰθερόπλαγκτον
ὠογενῆ χρυσέῃσιν ἀγαλλόμενον πτερύγεσσιν[h].

But how does Proclus prove his point?[i] Τοιαῦτα γὰρ περὶ αὐτοῦ (τοῦ αὐτοζώου) καὶ Ὀρφεὺς ἐνδείκνυται, περὶ τοῦ Φάνητος θεολογῶν. πρῶτος γοῦν ὁ θεὸς παρ' αὐτῷ ζώων κεφαλὰς φέρει πολλὰς,

κριΐας ταυρείους ὀφίας χαροποῦ τε λέοντος·

καὶ πρόεισιν ἀπὸ τοῦ πρωτογενοῦς ᾠοῦ, ἐν ᾧ σπερματικῶς τὸ ζῶόν ἐστιν. ὃ καὶ ὁ Πλάτων συνιδὼν αὐτοζῶον προσηγόρευσε τὸν μέγιστον τοῦτον θεόν· τί

z Proclus in Timæum, A. (i.) 66 = 29. D.
zz De Anima Mundi, (Opuscula Mythologica, 551, 552.)
a Proclus in Timæum, B. 200 = 85. C.
b Ibid. 201 = 85. E.
c Ibid. 183 = 77. F.
d Ibid. Δ. 584 = 241. B.
e Ibid. B. 301 = 128. A.
f Ibid. 302 = 128. B.
g Hymni, vi. Πρωτογόνου, ver. 1.
h Cf. Macrobius, Saturn. i. xviii. 301. Orphica, Fragmenta, vii.
i In Timæum, B. 307 = 130. B. C.

duration; viz. that of being a form of duration which must have had a beginning, and possibly may have an end. Whatsoever be the complex of duration, so measured by time, it is all equally finite at one or both of its extremities; and finite time must be referred to an epoch *a parte post*, from which it took its rise, and with respect to which, at any moment of its decursus afterwards, it is time past. And it must also virtually if not actually be referred to some epoch *a parte ante*, with respect to which, so long as it is continuing, it is time present or future; and in reference to something of that kind or other never can cease to be so, until the moment arrives when time itself ceases to be any longer.

Now though the phrase, *αἰὼν ὁ γεγονὼς, αἰὼν ὁ γεγενημένος, αἰὼν ὁ παρῳχηκὼς*, or any other to the same effect, does not occur in Scripture, yet *αἰὼν ὁ νῦν, αἰὼν ὁ ἐνεστὼς*, does occur there; and *αἰὼν ὁ μέλλων, αἰὼν ὁ ἐρχόμενος*, occurs there also: which being the case, it stands to reason that, whatsoever be meant by this term *αἰὼν* itself, a present and a future *αἰὼν* of that kind must imply and must recognise a past *αἰὼν* of the same kind too.

There are texts of Scripture however which cannot be understood of any thing but a complex of duration, designated by this peculiar term, *a parte post* as much as *a parte ante*; texts which speak of the decursus of an *αἰὼν* from a point in duration backwards, referred to any thing in existence at present, as well as others which speak of the same thing from a point in duration forwards. In this case too we have nothing to do first of all but to collect these texts, and to arrange them in their natural order: i. Such as relate to a past *αἰὼν*, or complex of time past: ii. Such as relate to a present and passing *αἰών*: iii. Such as refer to an *αἰὼν* of the same kind still to come.

---

γὰρ διαφέρει ἢ τὴν κρύφιον αἰτίαν ᾠὸν καλεῖν, ἢ τὸ ἐκφανὲν ἀπ' ἐκείνης ζῶον; τί γὰρ ἂν ἐξ ᾠοῦ γένοιτο τῶν πάντων πλὴν ζώου; ἣν δὲ τὸ ᾠὸν ἐκεῖνο τοῦ τε αἰθέρος ἔγγονον καὶ τοῦ χάους . . . εἰ οὖν τὸ πρῶτον ἐκ πέρατος καὶ ἀπείρου τὸ πρώτως ἐστὶν ὂν (ὁ αἰὼν scil.) εἴη ἂν ταὐτὸν τό τε Πλάτωνος ὂν καὶ τὸ 'Ορφέως ᾠόν. εἰ δὲ ἐκ τούτου ὁ Φάνης, κατὰ τὸ αὐτοζῶον τεταγμένος, δεῖ ζητεῖν κατὰ (lege καὶ) τὸν αἰῶνα παρὰ τῷ 'Ορφεῖ, μέσον ὄντα τοῦ αὐτοζώου παρὰ Πλάτωνι καὶ τοῦ ὄντος.

## I. Αἰών. In the sense of time *past*.

### i. Luke i. 70.

*Καθὼς ἐλάλησε διὰ στόματος τῶν ἁγίων τῶν ἀπ' αἰῶνος προφητῶν.*

### ii. Acts iii. 21.

*Ἀποκαταστάσεως πάντων ὧν ἐλάλησεν ὁ Θεὸς διὰ στόματος πάντων ἁγίων, αὐτοῦ προφητῶν, ἀπ' αἰῶνος.*

### iii. John ix. 32.

*Ἐκ τοῦ αἰῶνος οὐκ ἠκούσθη ὅτι ἤνοιξέ τις ὀφθαλμοὺς τυφλοῦ γεγεννημένου.*

### iv. Acts xv. 18.

*Γνωστὰ ἀπ' αἰῶνός ἐστι τῷ Θεῷ πάντα τὰ ἔργα αὐτοῦ.*

### v. 1 Cor. ii. 7.

*Ἀλλὰ λαλοῦμεν σοφίαν Θεοῦ ἐν μυστηρίῳ τὴν ἀποκεκρυμμένην, ἣν προώρισεν ὁ Θεὸς πρὸ τῶν αἰώνων εἰς δόξαν ἡμῶν.*

### vi. Romans xvi. 25.

*Κατὰ ἀποκάλυψιν μυστηρίου χρόνοις αἰωνίοις σεσιγημένου.*

### vii. Ephes. iii. 9, 10, 11.

*Καὶ φωτίσαι πάντας τίς ἡ κοινωνία τοῦ μυστηρίου, τοῦ ἀποκεκρυμμένου ἀπὸ τῶν αἰώνων . . . ἵνα γνωρισθῇ νῦν . . . ἡ πολυποίκιλος σοφία τοῦ Θεοῦ κατὰ πρόθεσιν τῶν αἰώνων.*

### viii. Coloss. i. 25, 26.

*Πληρῶσαι τὸν λόγον τοῦ Θεοῦ, τὸ μυστήριον τὸ ἀποκεκρυμμένον ἀπὸ τῶν αἰώνων καὶ τῶν γενεῶν.*

### ix. 1 Tim. 1. 17.

*Τῷ δὲ βασιλεῖ τῶν αἰώνων . . . τιμὴ καὶ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

### x. Titus i. 2.

*Ἐπ' ἐλπίδι ζωῆς αἰωνίου ἣν ἐπηγγείλατο ὁ ἀψευδὴς Θεὸς πρὸ χρόνων αἰωνίων.*

### xi. 2 Tim. i. 9.

*Κατ' ἰδίαν πρόθεσιν, καὶ χάριν τὴν δοθεῖσαν ἡμῖν ἐν Χριστῷ Ἰησοῦ, πρὸ χρόνων αἰωνίων.*

## II. Αἰὼν οὗτος, αἰὼν ὁ νῦν, αἰὼν ὁ ἐνεστώς.

i. Matt. xiii. 22.

*Καὶ ἡ μέριμνα τοῦ αἰῶνος τούτου καὶ ἡ ἀπάτη τοῦ πλούτου συμπνίγει τὸν λόγον.*

Mark iv. 19.

*Καὶ αἱ μέριμναι τοῦ αἰῶνος τούτου καὶ ἡ ἀπάτη τοῦ πλούτου, κ̀,τ.λ.*

ii. Luke xvi. 8.

*Ὅτι οἱ υἱοὶ τοῦ αἰῶνος τούτου φρονιμώτεροι ὑπὲρ τοὺς υἱοὺς τοῦ φωτὸς εἰς τὴν γενεὰν τὴν ἑαυτῶν εἰσιν.*

iii. Luke xx. 34.

*Οἱ υἱοὶ τοῦ αἰῶνος τούτου γαμοῦσι καὶ ἐκγαμίσκονται, κ̀, τ. λ.*

iv. Romans xii. 2.

*Καὶ μὴ συσχηματίζεσθε τῷ αἰῶνι τούτῳ.*

v. 1 Cor. i. 20.

*Ποῦ σοφός; ποῦ γραμματεύς; ποῦ συζητητὴς τοῦ αἰῶνος τούτου;*

vi. 1 Cor. ii. 6, 8.

*Σοφίαν δὲ λαλοῦμεν ἐν τοῖς τελείοις· σοφίαν δὲ οὐ τοῦ αἰῶνος τούτου, οὐδὲ τῶν ἀρχόντων τοῦ αἰῶνος τούτου . . . ἣν οὐδεὶς τῶν ἀρχόντων τοῦ αἰῶνος τούτου ἔγνωκεν.*

vii. 1 Cor. iii. 18.

*Εἴ τις δοκεῖ σοφὸς εἶναι ἐν ὑμῖν ἐν τῷ αἰῶνι τούτῳ, μωρὸς γενέσθω, κ̀,τ. λ.*

viii. 2 Cor. iv. 3, 4.

*Εἰ δὲ καὶ ἔστι κεκαλυμμένον τὸ εὐαγγέλιον ἡμῶν, ἐν τοῖς ἀπολλυμένοις ἐστὶ κεκαλυμμένον, ἐν οἷς ὁ θεὸς τοῦ αἰῶνος τούτου ἐτύφλωσε τὰ νοήματα τῶν ἀπίστων.*

ix. Ephes. vi. 12.

*Πρὸς τοὺς κοσμοκράτορας τοῦ σκότους τοῦ αἰῶνος τούτου.*

x. 1 Tim. vi. 7.

*Τοῖς πλουσίοις ἐν τῷ νῦν αἰῶνι παράγγελλε, κ̀, τ. λ.*

xi. 2 Tim. iv. 10.

*Δημᾶς γάρ με ἐγκατέλιπεν, ἀγαπήσας τὸν νῦν αἰῶνα.*

xii. Titus ii. 11, 12.

*Ἐπεφάνη γὰρ ἡ χάρις τοῦ Θεοῦ . . . ἵνα . . . σωφρόνως καὶ δικαίως καὶ εὐσεβῶς ζήσωμεν ἐν τῷ νῦν αἰῶνι.*

xiii. Galat. i. 4.

*Τοῦ δοντὸς ἑαυτὸν ......ὅπως ἐξέληται ἡμᾶς ἐκ τοῦ ἐνεστῶτος αἰῶνος πονηροῦ.*

xiv. Ephes. ii. 2.

*......Ἐν αἷς πότε περιεπατήσατε κατὰ τὸν αἰῶνα τοῦ κόσμου τούτου.*

## III. Αἰὼν ὁ μέλλων, αἰὼν ὁ ἐρχόμενος.

i. Matthew xii. 32.

*Ὃς δ' ἂν εἴπῃ κατὰ τοῦ Πνεύματος τοῦ ἁγίου οὐκ ἀφεθήσεται αὐτῷ οὔτε ἐν τούτῳ τῷ αἰῶνι οὔτε ἐν τῷ μέλλοντι.*

ii. Mark x. 30.

*......Καὶ ἐν τῷ αἰῶνι τῷ ἐρχομένῳ ζωὴν αἰώνιον*: (*τῷ μέλλοντι,* in opposition to *νῦν ἐν τῷ καιρῷ τούτῳ* just before.)

iii. Luke xviii. 30.

*Ὃς οὐ μὴ ἀπολάβῃ πολλαπλασίονα ἐν τῷ καιρῷ τούτῳ, καὶ ἐν τῷ αἰῶνι τῷ ἐρχόμενῳ ζωὴν αἰώνιον.*

iv. Luke xx. 35.

*Οἱ δὲ καταξιωθέντες τοῦ αἰῶνος ἐκείνου τυχεῖν, καὶ τῆς ἀναστάσεως τῆς ἐκ νεκρῶν, οὔτε γαμοῦσιν οὔτε ἐκγαμίσκονται.*

v. Ephesians i. 21.

*Ὑπεράνω......παντὸς ὀνόματος ὀνομαζομένου οὐ μόνον ἐν τῷ αἰῶνι τούτῳ ἀλλὰ καὶ ἐν τῷ μέλλοντι.*

vi. Hebrews vi. 5.

*Καὶ καλὸν γευσαμένους Θεοῦ ῥῆμα, δυνάμεις τε μέλλοντος αἰῶνος.*

vii. Ephes. ii. 7.

*......Ἵνα ἐνδείξηται ἐν τοῖς αἰῶσι τοῖς ἐπερχομένοις τὸν ὑπερβάλλοντα πλοῦτον τῆς χάριτος αὐτοῦ.*

## Section VI.—*Observations on the above texts.*

In all these different forms of expression, the meaning intended is one and the same: i. e. a complex of duration, not distinguishable from the proper notion of time, whether greater or less in itself, (for that is a distinct consideration;) whether the same in one of these instances as in another, or not, (for that too is a different question;) whether contemplated and alluded to as one period of that kind, or as more than one, (for that also is indifferent to our argument at present;) a complex designated in all alike by *αἰὼν* or *αἰῶνες*, but in some as a complex of that kind already over and past, in others as still future and to come; in others as even then passing and present. The idea, which enters into the word *αἰὼν*, in each of these instances alike is simply that of duration, measured in some manner or other by time; the idea of existence, succession, and continuity, either past, or present, or future; abstracted from all relation to any thing but duration itself.

In most of these passages too, the word which our translators have employed to render the Greek *αἰὼν* or *αἰῶνες* is *world* or *worlds*; nor can it be said that by adopting this version they have not done justice to the original, and have not rendered its meaning intelligible to an English reader. For the proper sense of our own word *world*, at first *, might be remarkably agreeable to that of the Greek *αἰὼν* or *αἶον*, or of the Latin *ævum*. But the meaning of words is liable to change in the course of time; and *world* as used in English at present, (and indeed at the time of the translation of the Bible,) would be the proper version of *κόσμος* in Greek, which is a very different word from *αἰών*. Between *κόσμος* and *αἰὼν*, however closely associated one with the other, there must

* On this subject Baron Humboldt observes, in one of the notes to his "Cosmos," (vol. i. p. xiv. note to p. 56.) "The original meaning of the latter word (the German) *welt*, of which we now make use, *weralt* in the old high German, *worold* in old Saxon, and *veruld* in Anglo-Saxon, referred rather to time (sæculum) than to space."

This is the proper explanation of our own phrase "world without end," which occurs in the version of Isaiah xlv. 17. and so repeatedly in the Book of Common Prayer. See Dr. Johnson's Dictionary.

still be, both in the nature of things and in the apprehension of each of those ideas by a competent understanding, a real and essential distinction. This is clearly proved by Ephesians ii. 2. (ii. art. xiv.) Ἐν αἷς ποτε περιεπατήσατε, κατὰ τὸν αἰῶνα τοῦ κόσμου τούτου. The impropriety of rendering αἰὼν here, in juxtaposition with κόσμος, by *world* compelled our translators to substitute for it in this instance a different word; and one much nearer to the proper sense of αἰὼν in Greek, understood of succession, continuance, duration or existence, measurable by time; but of nothing more: "according to the course of this world."

In like manner the impropriety of rendering this same word in many of these cases, in which it occurs in the plural, (especially where it relates to the past,) by *world* or *worlds*, obliged them to deviate from the uniformity of the version in such instances also, and to substitute *ages*, or something to the same effect, for *worlds*: as in Ephes. ii. 7: αἰῶσι τοῖς ἐπερχομένοις: not in the "worlds to come," but in the "ages to come." This want of uniformity in the version, when the word was every where the same in the original, is to be regretted; and though we would not be understood to say *that* word might always have been rendered by one word in English, as it is always one in the Greek, yet we think it might always have been rendered to one and the same effect in the English as in the Greek; whether by one word or by more.

The general conclusion however from the comparison of these different texts is obvious: viz. that the idea implied by αἰὼν in each of these instances is that of a course and succession of time, a determinate interval of duration, a complex of being and existence, connected with some proper subject; which, in all those allusions to this course and succession which represent it as present even then and passing, can be nothing but the present life or the present world; in those, which speak of it either as already over, or as still to come, cannot indeed be the present life or present world, but must still be something analogous to that, and standing in the same relation to an αἰὼν or to a series of αἰῶνες, already past or still to come, as the present life or present world does to an αἰὼν actually present and going on.

## CHAPTER II.

*On the Scriptural doctrine respecting the beginning of creation.*

### Section I.—*Texts.*

This brings us at once to the next and the most important division of our subject. The explanations premised of the classical meaning of *αἰὼν*, of the scriptural idiom in the use of this term, and of the specific distinctions in its general meaning as so used in Scripture, are only preliminary to other and much more interesting considerations; especially to that which most of all concerns the question of the real extent and comprehension of the chronology of Scripture, into which we are proposing to inquire: and this is the doctrine of Holy Writ with respect to the succession of *αἰῶνες* themselves, in the sense already explained: to which we shall now proceed.

The first observation which we have to make on this subject is, That the chronological intimations of Scripture go back to a point of time, (if we may speak of time when as yet there was no such thing as time,) anterior to creation itself; when as yet there was no such thing even as creation itself. We collect this from the following texts:

i. John xvii. 24.

*Πάτερ οὓς δέδωκάς μοι, θέλω ἵνα ὅπου εἰμὶ ἐγὼ κἀκεῖνοι ὦσι μετ' ἐμοῦ· ἵνα θεωρῶσι τὴν δόξαν τὴν ἐμὴν, ἣν δέδωκάς μοι· ὅτι ἠγάπησάς με πρὸ καταβολῆς κόσμου.*

ii. John xvii. 5.

*Καὶ νῦν δόξασόν με σὺ, Πάτερ, παρὰ σεαυτῷ τῇ δόξῃ ᾗ εἶχον πρὸ τοῦ τὸν κόσμον εἶναι παρὰ σοί.*

iii. Ephes. i. 4.

*Καθὼς ἐξελέξατο ἡμᾶς ἐν αὐτῷ πρὸ καταβολῆς κόσμου, εἶναι ἡμᾶς ἁγίους καὶ ἀμώμους κατενώπιον αὐτοῦ ἐν ἀγαπῇ.*

iv. 1 Pet. i. 18, 19, 20.

*Εἰδότες ὅτι οὐ φθαρτοῖς, ἀργυρίῳ ἢ χρυσίῳ, ἐλυτρώθητε ἐκ τῆς ματαιᾶς ὑμῶν ἀναστροφῆς πατροπαραδότου, ἀλλὰ τιμίῳ αἵματι ὡς*

*ἀμνοῦ ἀμώμου καὶ ἀσπίλου Χριστοῦ, προεγνωσμένου μὲν πρὸ καταβολῆς κόσμου, φανερωθέντος δὲ ἐπ᾽ ἐσχάτων τῶν χρόνων δι᾽ ὑμᾶς.*

The next observation which we have to make on the same intimations is the reverse of the preceding: That the chronological notices of Scripture go back to a point of time, posterior to creation but synchronous with the beginning of creation itself; before *which* and *down to which* there was as yet no such thing as creation; *after* which and *from* which there was. That is, they go back to the proper epoch of creation itself. We collect this truth also from the following texts:

i. Matt. xiii. 35.

*Ὅπως πληρωθῇ τὸ ῥηθὲν διὰ τοῦ προφήτου λέγοντος·*[a] *Ἀνοίξω ἐν παραβολαῖς τὸ στόμα μου· ἐρεύξομαι κεκρυμμένα ἀπὸ καταβολῆς κόσμου.*

ii. Matt. xxv. 34.

*Τότε ἐρεῖ ὁ βασιλεὺς τοῖς ἐκ δεξιῶν αὐτοῦ· Δεῦτε οἱ εὐλογημένοι τοῦ πατρός μου, κληρονομήσατε τὴν ἡτοιμασμένην ὑμῖν βασιλείαν ἀπὸ καταβολῆς κόσμου.*

iii. Luke xi. 50.

*Ἵνα ἐκζητηθῇ τὸ αἷμα πάντων τῶν προφητῶν, τὸ ἐκχυνόμενον ἀπὸ καταβολῆς κόσμου, ἀπὸ τῆς γενεᾶς ταύτης.*

iv. Hebrews iv. 3.

*Εἰσερχόμεθα γὰρ εἰς τὴν κατάπαυσιν οἱ πιστεύσαντες, καθὼς εἴρηκεν· Ὡς ὤμοσα ἐν τῇ ὀργῇ μου, εἰ εἰσελεύσονται εἰς τὴν κατάπαυσίν μου· καίτοι τῶν ἔργων ἀπὸ καταβολῆς κόσμου γενηθέντων.*

v. Hebrews ix. 25, 26.

*Οὐχ ἵνα πολλάκις προσφέρῃ ἑαυτὸν, ὥσπερ ὁ ἀρχιερεὺς εἰσέρχεται εἰς τὰ ἅγια κατ᾽ ἐνιαυτόν . . . ἐπεὶ ἔδει αὐτὸν πολλάκις παθεῖν ἀπὸ καταβολῆς κόσμου.*

vi. Apocal. xiii. 8.

*Καὶ προσκυνήσουσιν αὐτῷ πάντες οἱ κατοικοῦντες ἐπὶ τῆς γῆς, ὧν οὐ γέγραπται τὰ ὀνόματα ἐν τῇ βίβλῳ τῆς ζωῆς τοῦ ἀρνίου ἐσφαγμένου ἀπὸ καταβολῆς κόσμου.*

[a] Ps. lxxviii. 2.

vii. Apocal. xvii. 8.

*Καὶ θαυμάσονται οἱ κατοικοῦντες ἐπὶ τῆς γῆς, (ὧν οὐ γέγραπται τὰ ὀνόματα ἐπὶ τὸ βιβλίον τῆς ζωῆς ἀπὸ καταβολῆς κόσμου,) βλέποντες τὸ θηρίον, κ', τ. λ.*

## SECTION II.—*On the meaning of the phrases πρὸ καταβολῆς κόσμου and ἀπὸ καταβολῆς κόσμου; and on the scriptural use of καταβάλλω and καταβολή.*

Every one must perceive that the important phrase in the first of these collections of texts is *πρὸ καταβολῆς κόσμου*; and in the second is *ἀπὸ καταβολῆς κόσμου*: and that these are opposed one to the other; but only as *πρὸ* is opposed to *ἀπὸ*, or the idea of *prior* is to that of *posterior*, and the lapse of time *up to* a certain point is to the lapse of time *from* a certain point; this point itself being the same in each instance.

This point being designated as that of *καταβολὴ κόσμου*, (whatsoever may be meant by those terms,) if it is only a fixed and determinate point, and only stands in the same relation to every thing else both before and after it, the first of these classes of texts refers us to a course and succession of some kind *before* that point and *down* to that point; the second to a similar course and succession *after* that point and *from* that point. The meaning of *πρὸ* in one of these instances and that of *ἀπὸ* in the other requires no explanation; but, with regard to *καταβολῆς κόσμου* subjoined to each, the case is different. To the true scope and comprehension of these several texts, (which is in fact that of the chronology of Scripture itself,) nothing is so important as the meaning of this part of each of these phrases. We must endeavour therefore to ascertain it with all the exactness possible.

The substantive noun *καταβολὴ* in Greek is derived from the verb *καταβάλλω*: and this is compounded of *κατὰ* and *βάλλω*. *Κατὰ* is properly a preposition in Greek; which among other uses and significations answers to that of our English adverb *down*: and *βάλλω* in Greek means the same thing as our verb to *cast* or *throw*. *Καταβάλλω* then, in Greek, signifies in English to *cast* or *throw down*.

In this sense it occurs once in the New Testament; and

only once: Καταβαλλόμενοι ἀλλ' οὐκ ἀπολλύμενοι [b]: "Being cast down but not being destroyed." The idea, intended to be conveyed by this mode of speaking, is that of a person who receives a fall in wrestling: from which nevertheless he is able to recover himself, and to stand up again and to try the chance of another throw. It was the rule of the games of antiquity that candidates for the prize of the πάλη or Lucta, that is in the contest of wrestling, should experience three falls of this kind, before they were to be declared beaten, and forced to give up the contest: or what comes to the same thing, the victors in this particular contest must throw their adversaries three times running [c]. One sense then of the verb καταβάλλω, and obviously as proper a sense as any, is this, of to *cast down*, to *throw down*, to *overthrow*.

Another of the senses of this compound verb is that of laying *a bottom* on which something is to be erected; which is properly meant by laying *a foundation*. This meaning, it is evident, must be derived from the former; and therefore in comparison of that must be secondary: because the foundation of a building is necessarily its *lowest part;* and what goes to compose the substratum or foundation, in comparison of that which is afterwards *built* or *raised up* on it, appears to be *cast down*. In this sense too it occurs once, and once only, in the New Testament: Μὴ πάλιν θεμέλιον καταβαλλόμενοι μετανοίας ἀπὸ νεκρῶν ἔργων [d]. There are no more instances in the New Testament of the use of this verb in any sense; but these two.

With regard to the substantive καταβολὴ, derived from it; it occurs in the texts which we began with producing; and in one more: Πίστει καὶ αὐτὴ Σάρρα δύναμιν εἰς καταβολὴν σπέρματος ἔλαβεν [e]. In this latter instance it is easy to see that the noun derives its meaning from the proper and pri-

[b] 2 Cor. iv. 9.

[c] Thus in the Phædrus of Plato, (pars I. tom. i. 59 (=256) 6) τελευτήσαντές τε δὴ ... τῶν τριῶν παλαισμάτων τῶν ὡς ἀληθῶς Ὀλυμπιακῶν ἓν νενικήκασιν.

Hence, in the Eumenides of Æschylus, the Chorus say to Orestes,

Ἓν μὲν τόδ' ἤδη τῶν τριῶν παλαισμάτων.—ver. 589.

To which he replies,

Οὐ κειμένῳ πω τόνδε κομπάζεις λόγον. ver. 590.

And hence the designation of τριακτὴρ in the sense of a master or superior, (literally one who thus beats an adversary three times,) which Æschylus himself uses in another instance, to imply that Jupiter had no superior:—Agamemnon, 171, 172.

[d] Hebrews vi. 1.

[e] Ibid. xi. 11.

mary sense of the verb; that of throwing or casting down. The act of a sower, when scattering the seed up and down, in order that it may fall every where on the ground and every where take root and spring up, could not be better described than by καταβολὴ σπέρματος. And it is implied in this text of the Epistle to the Hebrews[e], that Sarah herself, though grown old and past the natural time of childbearing, yet through faith received strength for such a casting down of seed as this: that is, was rendered as competent a subject for this dispensation of the birth of Isaac, notwithstanding her time of life, as the ground is, under ordinary circumstances every year, for the reception of the seed, which is thus cast upon it by the sower.

In this instance then, the meaning of the noun is clearly derived from the primary sense of the verb. In the other instances, in which it occurs with πρὸ and ἀπὸ, it must be derived from the secondary; it can have no signification but that of foundation: so that as there are but two senses of the verb καταβάλλω itself, (at least in the New Testament,) so there are but two of the substantive καταβολὴ derived from it; one of which refers to the proper and primary meaning of the theme, the other to the derivative or secondary.

We do not consider it necessary to say any thing particular in explanation of the term κόσμος, which occurs with καταβολὴ in each of these instances. It may be taken for granted that its meaning is "world;" and that it cannot be improperly rendered in English by our own word "world." It follows then that by the first of these phrases, πρὸ καταβολῆς κόσμου, we are taken back to a point of duration before which and down to which there was, as yet, no such thing as the καταβολὴ κόσμου; and by the second, ἀπὸ καταβολῆς κόσμου, we are brought down from one at which and after which there was. The question consequently which naturally presents itself here is *this*: Whether the καταβολὴ κόσμου, the point of duration alluded to in each of these instances alike, is the beginning of *our own* system of things; the beginning of *our own* world; of that course and succession of things with which *we* find ourselves connected in our proper order of being, and with which our ancestors found themselves

[e] Heb. xi. 11.

connected before us, each in his turn? or whether it is something *different* from that.

SECTION III.—*Whether the καταβολὴ κόσμου, in the Scriptural sense and reference of that phrase, is to be understood of the beginning of our own world.*

The first observation which we have to make preliminary to the decision of this question concerns the grammatical form and enunciation of each of these phrases, πρὸ καταβολῆς and ἀπὸ καταβολῆς κόσμου. The absence of the article before καταβολὴ and before κόσμου also is characteristic of each of them; and considering that the phrase occurs so often, and yet is always distinguished by this omission, we cannot but look on the omission as intentional and significant.

The learned do not require to be reminded of the difference between two such phrases as πρὸ καταβολῆς κόσμου, or ἀπὸ καταβολῆς κόσμου, and πρὸ τῆς καταβολῆς τοῦ κόσμου, or ἀπὸ τῆς καταβολῆς τοῦ κόσμου: and that the former could not be limited to one specific act or instance of the foundation in question, but that the latter must be. An unlearned reader may be made aware of the distinction by being told that there is the same difference between these two forms of the same proposition in Greek, as between "Before the foundation of *a* world," or "From the foundation of *a* world," and "Before the foundation of *the* world," or "From the foundation of *the* world," in English. We cannot indeed dispense with the definite article before the word *foundation* in the English, though it is wanting in the Greek; but we can before the word *world:* or rather we express its absence before that word in the Greek, by the indefinite article prefixed to it in the English. Any one however, who understood his own language, would just as naturally collect from this mode of speaking in English, that no particular case of the foundation in question could be meant in either of these instances, (nothing but some such foundation in general,) as the learned from the corresponding manner of speaking in the Greek.

It appears to us then, that the absence of the article in each of these propositions is significant. And indeed it makes so great a difference to the true meaning of the phrase in

either instance, whether the foundation in question is to be restricted to *some one* case of the kind, or to be extended and applied to all of which it could possibly be understood; that we can scarcely suppose this omission other than intentional and significant. For if this foundation is to be restricted to some one case of the kind, we may take it for granted it must be that of our own world; and therefore that the point in duration, designated by πρὸ in one of these propositions, and by ἀπὸ in the other, can be neither more nor less remote than the epoch of the Mosaic creation. We cannot however arrive at this conclusion without passing on to another necessarily involved in it; viz. That the epoch of the Mosaic creation in that case must be the epoch of creation *absolutely:* for that these phrases, *πρὸ καταβολῆς κόσμου* and *ἀπὸ καταβολῆς κόσμου,* used as they are and standing as they do, are to be understood one of a time *before,* the other of a time *after,* the beginning of creation *absolutely,* we do not think it possible to deny.

Yet this further conclusion from the same words, natural and necessary as it must be, would lie open to many difficulties and to many objections; and would seem to set Scripture at variance even with itself. For if we compared this phrase of *πρὸ καταβολῆς κόσμου,* as used in Ephes. i. 4, or 1 Peter i. 10, with that of *πρὸ τῶν αἰώνων* in 1 Cor. ii. 7; or with that of *κατὰ πρόθεσιν τῶν αἰώνων,* Ephes. iii. 11; or with that of *πρὸ χρόνων αἰωνίων,* Titus i. 2: 2 Tim. i. 9; or with that of *χρόνοις αἰωνίοις,* Rom. xvi. 25: and if we compared the corresponding phrase of *ἀπὸ καταβολῆς κόσμου* with that of *ἀπὸ τῶν αἰώνων,* Ephes. iii. 9, Coloss. i. 26: forasmuch as the context of all these other passages would clearly demonstrate that one and the same economy, purpose, or dispensation, realized and consummated in the Christian scheme, one and the same mystery or secret, however long before concealed, brought to light and revealed at last by the actual publication of the Gospel, was the subject of description in them all; it would follow that *πρὸ καταβολῆς κόσμου* could be only another form of expression for *πρὸ τῶν αἰώνων,* and *ἀπὸ καταβολῆς κόσμου* only another for *ἀπὸ τῶν αἰώνων.* If so, the *καταβολὴ κόσμου* and the beginning of these *αἰῶνες* must be the same; and if

the former meant only the epoch of the Mosaic creation, the latter too could mean no more.

It is not necessary to object to this conclusion, its incompatibility with the scope and comprehension of such a term as *αἰὼν*, especially in the plural number, that it should be supposed to be thus restricted to the course and succession of any one system of things, like that of the Mosaic creation. It is sufficient for our purpose to remind the reader of those other passages, according to which the course and succession of things which bears date from the Mosaic creation, (consequently the *present* course and succession,) is set forth as one of these *αἰῶνες* itself; only as *αἰὼν ὁ νῦν, αἰὼν οὗτος, αἰὼν ὁ ἐνεστώς*. Now it is not possible that it could both be only *one* of those *αἰῶνες*, and yet the *whole* of those *αἰῶνες* also. An individual part of a certain class of things could never be the complex or total of its proper class. If the Mosaic creation is one of these *αἰῶνες*, but only one, there must be others distinct from that; and since this is confessedly the youngest of all, there must be others older than that. The proper epoch of *none* of these could be the proper epoch of the whole, except that of the first of all; that of the first of the series itself. The proper epoch of the last at least could not possibly stand in that relation to the whole; and if *πρὸ καταβολῆς κόσμου* goes back beyond the absolute epoch of all these *æons*, or *ἀπὸ καταβολῆς κόσμου* comes down from the absolute epoch of the very first among them; nothing would seem to be more certain than that both must go back beyond the epoch of the Mosaic creation at least.

Again, with respect to the particular instance of the phrase *πρὸ καταβολῆς κόσμου*, John xvii. 24, where our Saviour was speaking of his own preexistence, and of the glory, inseparable from his eternal generation, which he had with the Father from the first; it does not seem possible to doubt that the reference there must be to a point of duration long anterior to the epoch of the Mosaic creation. It would be greatly to mistake these words, and most unjustifiably to explain away their force and emphasis and to limit their scope and comprehension, to assume that the relation of son to which the possession of this glory was inseparably attached from the

first, and the consequent possession of that glory itself, in this retrospect of our Lord's went no further back than the epoch of the Mosaic creation. And though it may be objected that in the 5th verse of the same chapter, just before, he himself does appear so to limit it, in the words, Καὶ νῦν δόξασόν με σὺ, πάτερ, παρὰ σεαυτῷ, τῇ δόξῃ ᾗ εἶχον πρὸ τοῦ τὸν κόσμον εἶναι παρὰ σοί: this is no necessary inference even from those words. We are not authorized to assume that ὁ κόσμος referred to here is meant of the Mosaic creation. The enunciation of this phrase πρὸ τοῦ τὸν κόσμον εἶναι, and that of the other πρὸ καταβολῆς κόσμου, in words may differ; but the sense of each must be the same; and if the latter cannot be referred simply to the Mosaic creation, neither can the former. The article, it is true, is wanting in the latter before κόσμου, and present in the former before κόσμον: but this distinction does not determine the former to be meant of the Mosaic world. Κόσμος, with the article, standing absolutely, and having nothing predicated of it but simple being, as implied by εἶναι, is capable of being understood of creation in the abstract; the characteristic distinction of which in all and each of its acts or parts is still this common property of κόσμος, of order, arrangement, and beauty; according to the proper meaning of κόσμος itself in the Greek language. It may be understood of creation in its totality, of creation as made up of innumerable worlds or κόσμοι, yet comprehending in itself and summing up in itself the beauty and perfection of all; of creation as the κόσμος κατ' ἐξοχὴν, the κόσμος κόσμων itself. In no light but this could the complex of creation, regarded as one whole made up of how many soever parts, appear; especially to its own Creator: and in this light might it appear to our Saviour; and be spoken of accordingly in his allusion to it here.

That these words of our Lord indeed, with reference to his own preexistence and to his antemundane glory, neither are to be nor can be restricted to the epoch of any one act of creation, but must go back to the epoch of all creation and beyond it too; may be further collected from the exordium of St. John's Gospel[f]: Ἐν ἀρχῇ ἦν ὁ Λόγος, καὶ ὁ Λόγος ἦν

[f] i. 1, 2.

*πρὸς τὸν Θεὸν, καὶ Θεὸς ἦν ὁ Λόγος· οὗτος ἦν ἐν ἀρχῇ πρὸς τὸν Θεόν*: which asserts his communion with God not only at the beginning but prior to the beginning. But what beginning? that of the Mosaic creation and of the present system of things? or that of any creation and of any system of things? Let the third verse of the same chapter answer that question: *Πάντα δι' αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ ἐγένετο οὐδὲ ἓν ὃ γέγονεν*: or Colossians i. 15; in which he is represented as *πρωτότοκος πάσης κτίσεως*; "Begotten before all creation," or as the Nicene creed expresses it, "Begotten before all worlds:" or Coloss. i. 17, wherein he is set forth as *αὐτὸς πρὸ πάντων*—"Himself before all things;" *before*, in point of priority of being or existence; already in possession of his proper being and of every thing belonging to it, long before any thing else came into existence.

And this leads us to observe that to restrict the epoch of creation absolutely to that of our own system would involve us in another absurdity; that of supposing the complex and totality of creation itself to be summed up in our own system. The complex of our own system could not be more at the utmost than the complex of the material, that is of the visible, universe: and that too only on the supposition that the visible heavens with their contents, the stars, the sun, the moon, and the planets, were still part of our own system. But the complex of creation absolutely must include the immaterial and invisible world as well as the material and visible; unless we should go so far as to renounce all belief in the actual existence of a world like the former; contrary to the plainest and most positive declarations of Scripture itself.

But, admitting the fact of this distinction, is any one prepared to maintain that both came into being at once? or both at least at the epoch of our own system? that the creation of angels and the creation of mankind were synchronous? that the spiritual and invisible world, in the order of existence, is no older than the human and visible? Are not the angels represented in Scripture as spectators when the creation of our own world was going on? "when the morning stars sang together, and all the sons of God shouted for

joy[g]?" Is it possible to doubt that the fall of the angels must have been an event older than the creation of man, when we read of a tempter and of a temptation almost on the day of that creation itself; and know that this tempter was none other than the prince of the fallen angels themselves, the ὄφις ὁ ἀρχαῖος[h], the serpent, as old as the beginning of the present system of things? Very absurd opinions indeed have been entertained on the relative order of these different events, the creation of the angels and the creation of man; the fall of the angels and the fall of man[i]: and it has been imagined even that the fall of the angels intervened between the creation and fall of man. No such opinion requires a serious answer. Not only Scripture and common sense but nature itself reclaims against it. The traces of evil on the face of nature are older than the Mosaic creation. And wheresoever we meet with the marks and impressions of evil in the midst of the works of God, there also we meet with the vestiges and traces of sin: we read the testimony of nature itself to the fact of a fall; either the fall of the angels or the fall of man.

The truth indeed may be that the absolute epoch of the material creation and that of the immaterial are not distinguishable asunder; and that the material world and the world of spirits in point of fact never existed one independently of or one without the other. To judge from the analogy of the state of things at present; it seems to have made part of the scheme and economy of creation from the first, that the material world should be subject to and dependent upon the spiritual, yet that the spiritual itself should not be independent of the material: that as the body and the soul of man were formed for each other, and as neither is in its proper natural state of being nor in pos-

[g] Job xxxviii. 7. Stars are the standing image in Scripture for angels or gods: see Numb. xxiv. 17: Amos v. 26 (Acts vii. 43): Isaiah xiv. 12, 13: Ezek. xxviii. 12–14: xxxi. 7, 8: Dan. viii. 10: xii. 3: Matt. ii. 2: 7: 9: 10: xxiv. 29: Mark xiii. 25: Apoc. i. 16: 20: ii. 1: iii. 1: vi. 13: viii. 10, 11: 12: ix. 1: xii. 1: 4. The prince of the fallen angels, as the head of the angels, before his fall was typified by Lucifer, the leader of the stars, Isaiah xiv. 12. But now the true and sole archangel is Michael, that is, our Lord himself: and therefore the title of the Morning Star is now applied exclusively to him: Rev. ii. 28. xxii. 16.

[h] Revelation xii. 9. Cf. John viii. 44. 2 Cor. xi. 3.

[i] Zonaras, i. ii, p. 14. C. D. From the λεπτὴ Γένεσις. Cf. Photius, Cod. 232. p. 289. l. 40. Stephen Gobarus.

session of its proper perfection without the other; so the material and the spiritual world were formed for each other also, and neither was intended and neither was adapted to exist independently of the other.

When we say this, we do not mean to imply that the material world was ever intended or ever adapted to serve as a body to the spiritual world; but simply that as the corporeal part of man is material and yet is subordinate to the soul of man which is spiritual; so the material world in general may have been purposely subjected to the immaterial: and as the soul of man without the body also would want the fittest and most appropriate of natural instruments even for the exercise and display of its peculiar powers and perfections; so would the spiritual world without the material be destitute of the most appropriate and most requisite field for its peculiar energies and operations. Nor do we hesitate to affirm that intimations of this connection between the visible and the invisible world, and of this subjection of the inferior to the superior order of creatures, appear in Scripture itself; though we do not think it necessary to stop at present, for the sake of collecting them, or of pointing them out.

To distinguish therefore between the material and the immaterial creation even from the first, and to suppose a different epoch for each, may be as contrary to the matter of fact (i. e. to the actual order and course of events) as to analogy and the reason of things. It is at least very conceivable that the state of the case may have been from the first what we are given to understand it is destined to be hereafter for ever; even when men shall have become equal to the angels, and so far a part of the spiritual world themselves. We are not told that they must expect even then to cease to be connected with the material world; nor yet to continue to be connected with it after a manner entirely new, and in no sense familiar to them from their former experience. They are promised a body still; but a spiritual body: and an earth still, but a new earth; the same in general with that on which their existence before was transacted, but differing from it in its specific character, and in its particular constitution; especially in being purified from

all that alloy and corruption which debased and deteriorated it before.

To return then to the question which we are discussing, that of the proper point of duration referred to in πρὸ καταβολῆς κόσμου or in ἀπὸ καταβολῆς κόσμου; especially in that particular instance of the former of these references which occurs John xvii. 24, in connection with the preexistence of our Lord Jesus Christ: What, we may ask, is the doctrine of Holy Writ respecting the preexistence of the Divine Logos or Word, the everlasting Son of the everlasting Father, relatively to the beginning of creation of any kind? or what is the interval actually recognised in Scripture between the eternal generation and the first communication of being to any created thing, material or immaterial? The distance is infinite. It cannot be conceived in idea, much less reduced to any of the known measures of duration, or expressed in words. How is it possible then to limit the preexistence of the Son of God to the beginning of any one system of creation, even the oldest of all, whatsoever that may have been? much less to the beginning of our own—the youngest of all; a creature of yesterday in comparison with the first among all which must have preceded it? one, of which the years, and months, and days, and even the hours and the minutes, are capable of being calculated and reckoned up even by ourselves.

It is the doctrine of revelation upon this point, That the mediate or proximate author of all creation was the second Person of the most holy, most glorious, and ever undivided Trinity; that though the paternal Deity—(that mysterious essence which exceeds all finite comprehension, and on whose unoriginated perfections it is not possible to meditate without the profoundest sense of awe and adoration)—is the author of life and being to the Son, and through the Son to every thing possessed of life and existence also; yet the relation of the Son to these joint creatures of both the Father and himself is nearer than that of the Father; the Son stands between the Father and the creature of every kind: the Son, to the creature, is the representative of the Creator; the Son, after an ineffable manner, is the instrument of the Father in communicating to all other things, each in its

several proportion, that life and being which he himself derives in all its plentitude and all its perfection from the Father[k]: so that it is equally true to say the Father is the universal Creator, and the Son is the universal Creator; and that, while the ultimate agency is the Father's, the mediate agency is the Son's; and yet the agency of neither is separated from that of the other.

In this sense, according to Scripture, all creation was the work of the Son. Throughout the immensity of space, through the entire universe of matter, in the world of sense and in the region of spirits, in the height above and in the depth below, in heaven and in earth and in Hades, all is the work of the Son. Nothing exists which was not created by the Son. The Son is the final end of their being, (εἰς ὃν or δι' ὃν,) the Son is the instrumental means of their being, (δι' οὗ,) the Son is the efficient cause of their being, (ἐξ οὗ,) to all. And as he created all things, so he sustains or conserves all things; and by him all things consist: whatsoever was brought into being, is kept and continued in being also by him.

These various propositions we cannot do better than confirm by the testimonies of Scripture, confining ourselves to those of the New Testament; because it is to the New Testament that we owe the first clear and distinct revelation of these great and momentous truths. Creation is every where in the Old Testament attributed to God. But after what has been explained, and with the light which the New Testament has reflected on the meaning of the Old; it will now be understood that all such ascriptions and acts of creation, with a proper and personal reference at least, are intended as those of the second Person of the most Holy Trinity.

With regard to the New Testament, we have nothing to do but to produce these proofs. It will be proper however to exhibit those of each kind; both such as refer all creation to the first Person and such as refer it to the second: for, after what has been premised, it will be evident that there is no inconsistency in them, nor any difficulty in reconciling one class of such testimonies to the other.

k John v. 21, 26: Cf. 17, 19, 20.

## SECTION IV.—*Texts of Scripture, relating to the agency or work of creation.*

### i. Rom. xi. 36.

*Ὅτι ἐξ αὐτοῦ καὶ δι' αὐτοῦ καὶ εἰς αὐτὸν τὰ πάντα· αὐτῷ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.*

### ii. Ephesians iii. 9.

*Καὶ φωτίσαι πάντας τίς ἡ κοινωνία τοῦ μυστηρίου τοῦ ἀποκεκρυμμένου ἀπὸ τῶν αἰώνων ἐν τῷ Θεῷ, τῷ τὰ πάντα κτίσαντι διὰ Ἰησοῦ Χριστοῦ.*

### iii. Hebrews ii. 10.

*Ἔπρεπε γὰρ αὐτῷ, δι' ὃν τὰ πάντα καὶ δι' οὗ τὰ πάντα, πολλοὺς υἱοὺς εἰς δόξαν ἀγαγόντα, τὸν ἀρχηγὸν τῆς σωτηρίας αὐτῶν διὰ παθημάτων τελειῶσαι.*

### iv. Apocalypse iv. 11.

*Ἄξιος εἶ Κύριε λαβεῖν τὴν δόξαν καὶ τὴν τιμὴν καὶ τὴν δύναμιν· ὅτι σὺ ἔκτισας τὰ πάντα, καὶ διὰ τὸ θέλημά σου εἰσὶ καὶ ἐκτίσθησαν.*

### v. John i. 1—3. 10, 11.

*Ἐν ἀρχῇ ἦν ὁ Λόγος, καὶ ὁ Λόγος ἦν πρὸς τὸν Θεὸν, καὶ Θεὸς ἦν ὁ Λόγος· οὗτος ἦν ἐν ἀρχῇ πρὸς τὸν Θεόν. πάντα δι' αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ ἐγένετο οὐδὲ ἓν ὃ γέγονεν*[1] *... ἐν τῷ κόσμῳ ἦν, καὶ ὁ κόσμος δι' αὐτοῦ ἐγένετο· καὶ ὁ κόσμος αὐτὸν οὐκ ἔγνω. εἰς τὰ ἴδια ἦλθε, καὶ οἱ ἴδιοι αὐτὸν οὐ παρέλαβον.*

### vi. Hebrews i. 10—12.

*Καὶ, Σὺ κατ' ἀρχὰς Κύριε τὴν γῆν ἐθεμελίωσας, καὶ ἔργα τῶν χειρῶν σού εἰσιν οἱ οὐρανοί· αὐτοὶ ἀπολοῦνται, Σὺ δὲ διαμένεις· καὶ πάντες ὡς ἱμάτιον παλαιωθήσονται, καὶ ὡσεὶ περιβόλαιον ἑλίξεις αὐτοὺς, καὶ ἀλλαγήσονται· Σὺ δὲ ὁ αὐτὸς εἶ, καὶ τὰ ἔτη σοῦ οὐκ ἐκλείψουσι.*

### vii. 1 Cor. viii. 6.

*Καὶ εἷς Κύριος Ἰησοῦς Χριστός· δι' οὗ τὰ πάντα, καὶ ἡμεῖς δι' αὐτοῦ.*

### viii. Ephesians iii. 14, 15.

*Τοῦ Κυρίου ἡμῶν Ἰησοῦ Χριστοῦ· ἐξ οὗ πᾶσα πατριὰ ἐν οὐρανοῖς καὶ ἐπὶ γῆς ὀνομάζεται.*

### ix. Colossians i. 15—17.

*Ὅς ἐστιν εἰκὼν τοῦ Θεοῦ τοῦ ἀοράτου, πρωτότοκος πάσης*

[1] Cf. Proverbs, iii. 19, 20. viii. 22, 23–31.

*κτίσεως· ὅτι ἐν αὐτῷ ἐκτίσθη τὰ πάντα, τὰ ἐν τοῖς οὐρανοῖς καὶ τὰ ἐπὶ τῆς γῆς, τὰ ὁρατὰ καὶ τὰ ἀόρατα, εἴτε θρόνοι εἴτε κυριότητες εἴτε ἀρχαὶ εἴτε ἐξουσίαι, τὰ πάντα δι' αὐτοῦ καὶ εἰς αὐτὸν ἔκτισται. καὶ αὐτός ἐστι πρὸ πάντων, καὶ τὰ πάντα ἐν αὐτῷ συνέστηκε.*

x. Hebrews i. 3.

*Ὃς ὢν ἀπαύγασμα τῆς δόξης καὶ χαρακτὴρ τῆς ὑποστάσεως αὐτοῦ, φέρων τε τὰ πάντα τῷ ῥήματι τῆς δυνάμεως αὐτοῦ, κ', τ. λ.*

xi. Apocalypse iii. 14.

*Τάδε λέγει ὁ Ἀμὴν, ὁ Μάρτυς ὁ πιστὸς καὶ ἀληθινὸς, ἡ ἀρχὴ*[m] *τῆς κτίσεως τοῦ Θεοῦ.*

SECTION V.—*Particular consideration of the texts in which the phrases* πρὸ καταβολῆς or ἀπὸ καταβολῆς κόσμου *occur.*

If however we proceed to consider the passages in which either of these phrases occurs, (as collected supra[n],) a little more particularly; we may observe, i. That in none of the three in which the former occurs can the reference be to any point of duration but one, whatsoever that may be; viz. that which goes as far back as in the nature of things was possible. This must be evident, after what has been explained. And for the same or similar reasons it must be equally true of three of the texts in which *ἀπὸ καταβολῆς* occurs[o]; especially when compared with the other passages of Scripture also produced, relating to the purpose of God from all eternity with respect to the terms of salvation through faith in Jesus Christ.

ii. With regard to Matth. xiii. 35, which is a quotation from Ps. lxxviii. 2, did the words themselves allow of such a restriction, it might be referred to no more distant an epoch than the beginning of our own system. But it is just as capable of being referred to any more distant epoch, even to that of the first creation itself. Nor could any one venture to say that it was not intended to be so referred, for any thing which he could know to the contrary. The same observation may be made on Luke xi. 50: even though the first instance

m That is, ὁ ἀρχηγός: The beginner: with whom, and through whom, it began.

n Page 301—303.

o Matth. xxv. 34: Apocal. xiii. 8: xvii. 8.

of righteous blood, that is of blood unjustly shed, *de facto* might go no further back than the time of Abel; and consequently not even so far as the epoch of our own creation.

iii. With regard to Hebrews iv. 3: were we obliged to suppose those words to have a special reference to the work of the hexaëmeron, it would be difficult to avoid the inference that *ἀπὸ καταβολῆς κόσμου* with such a reference was to be understood of the foundation of the present world. But the context of the entire passage in our opinion conspires to prove that the idea, presented to the mind of the writer, was that of a *σαββατισμὸς* or *κατάπαυσις* still to come; though so long after the beginning of those works themselves of which it was destined to be the consummation: a *σαββατισμὸς* only typified by that of the seventh day, the close of the Mosaic creation[p].

This contrast is rendered more striking, if the works in question are understood of the work of creation from the very first moment when it actually began; long anterior it might be to the epoch of the Mosaic creation. The words should be rendered, not "although the works were finished from the foundation of the world," but "although the works had taken place from *the* foundation of a world." This is intended to intimate that the work or labour, properly so called, in contradistinction to the *σαββατισμὸς* or rest from such labour which should some time or other ensue, had begun the moment creation itself had begun; and having once begun it had not strictly speaking even then come to an end, but it was still continuing, and in the same way; agreeably to our Saviour's own declaration[q] concerning the very same thing; that the Father had never ceased to work, notwithstanding the interposition of the sabbath, in his proper capacity of the Preserver as well as Maker of all things. Such is the meaning of *γενηθέντων* here. It is the same as *γενομένων*: and as used here, in the sense of "having taken place," it is evidently synonymous with "having begun."

iv. With regard to Hebrews ix. 25, 26: had those texts spoken expressly of Christ's offering himself repeatedly for such an end and purpose as the sins of *men;* they might and perhaps even must have been understood of his offering

p Cf. iv 1, 2. 6, 7. 8, 9. 10, 11.

q John v. 17. 19, 20.

himself repeatedly since the foundation of our *own world*. But they do not so speak; nor specify any such end and purpose of this supposed offering of himself repeatedly, as the expiation of the sins of men. There are passages of Scripture which imply that other rational and responsible beings as well as men, creatures of God too as well as men, have had and still have need of an offering for sin as well as men; and yet that none has been provided for them as there has for men. Of this number is ii. 16, of this very epistle; and in our opinion 1 Pet. i. 12: Εἰς ἃ ἐπιθυμοῦσιν ἄγγελοι παρακύψαι [a]: for παρακύψαι along with εἰς, as the classical reader must know, has the sense of "to attain to"; and is so used in James i. 25. Who shall say then that the idea present to the mind of the inspired author of this allusion to the necessity of a repeated offering for sin since the foundation of the world, if such an offering was to be made as often as there was actual occasion for it, was not that of the case of the angels? There has been such a thing as the sin of the angels and the fall of the angels; as well as the sin of man and the fall of man: and the fall of the angels is older than the fall of man, and older than the epoch of the Mosaic creation; yet is not older than that of their *own* creation, nor that of any creation. It cannot go back beyond the foundation of a *world* in any sense; of some one of which even they in the proper order of their being must always have formed a part.

v. We observe in the last place that there are other allusions, besides these, to the beginning absolutely, or to the beginning of creation; in different terms indeed, yet distinguished by the absence of the article, just as much as these. Such are, Ἀπ' ἀρχῆς κόσμου [s]—Ἀπ' ἀρχῆς κτίσεως ἧς ἔκτισεν ὁ θεός [t]—Ἀπὸ κτίσεως κόσμου [u]—Ἀπ' ἀρχῆς κτίσεως [x]. It is difficult not to conclude from this uniformity of idiom, in the use or non-use of the article, that such propositions were purposely so

r Cf. James ii 19.

s Matth. xxiv. 21.

t Mark xiii. 19.

u Rom. i. 20.

x 2 Pet. iii. 4. We do not class with these Matth. xix. 4. 8: ὁ ποίησας ἀπ' ἀρχῆς: ἀπ' ἀρχῆς δὲ οὐ γέγονεν οὕτως—or Mark x. 6. ἀπὸ δὲ ἀρχῆς κτίσεως—because they refer to the institution of marriage, and to the formation of the male and the female, for each other: consequently to the beginning of our own system of things. Cf. however Heb. iv. 13: οὐκ ἔστι κτίσις ἀφανὴς ἐνώπιον αὐτοῦ: "any creation" or "any creature."

expressed, lest their scope and meaning should be limited within the utmost extent of which it was capable. Compare with these Hebrews ix. 11: Οὐ ταύτης τῆς κτίσεως—where the reference must be to the present creation[y], if to any in particular. The enunciation of the phrase is changed: and the reason of the change is obvious: viz. to oppose a material tabernacle, a tabernacle composed of earthly materials, and wrought by human hands, (a tabernacle consequently necessarily of *this* creation, and proper for such a creation,) to an immaterial tabernacle, not composed of earthly materials, nor made by human hands, consequently not of *this* creation; the spiritual tabernacle of the body of Jesus Christ, of which the material was only a type[z]*.

## CHAPTER III.

*On the doctrine of Scripture with respect to the succession of αἰῶνες, and to the place of the Mosaic αἰὼν in the order of succession.*

### SECTION I.—*Substance of the testimony of Scripture in two propositions.*

THE drift of the preceding reasonings, if they have not been altogether mistaken, being to establish the fact that the absolute epoch of *all* creation must go back far beyond the date of the *Mosaic* creation; they have prepared the way

* There is probably no text of Scripture, in which the distinction of κόσμος without the article and κόσμος with it is more significant and more to be attended to, than the celebrated text of 1 Tim. iii. 16. Among the remarkable propositions which there occur, this is one: Ἐπιστεύθη ἐν κόσμῳ: not ἐν τῷ κόσμῳ. It would be easy to shew (were this the proper place to enter on the explanation of the text) that there was a reason for that distinction; and that a much deeper meaning is implied in it than at first sight appears.

Compare also 2 Cor. v. 19. Κόσμον καταλλάσσων ἑαυτῷ, not τὸν κόσμον. The omission of the article is significant here too.

y As in Mark xvi. 15. πάσῃ τῇ κτίσει: or Coloss. i. 23. ἐν πάσῃ τῇ κτίσει τῇ ὑπὸ τὸν οὐρανόν: or Rom. viii. 19—21: where ἡ κτίσις occurs thrice of the present creation.

z Cf. Hebr. viii. 5: ix. 8, 9.

for the actual testimony of Scripture on this most important yet most mysterious subject: and that testimony now is likely to be better understood, and to be more correctly estimated than it could all at once have been.

This testimony of Scripture, so far as we have been permitted and enabled to collect it for ourselves, to the best of our judgment may be summed up in two propositions: I. That, from the absolute epoch of the first act of creation, there has been a succession of such periods as those which Scripture denominates *αἰῶνας*. II. That the last of these periods is an *αἰὼν* of the same kind in general as all before it, but at present in existence: consequently the *αἰὼν* which is dated and must be dated from the epoch of the Mosaic creation. Such is, as we apprehend, the simple doctrine of Scripture itself on these points. We wish to treat of each of the above propositions as of a question of *fact;* which must be determined in the same manner as all other questions of fact; viz. by testimony; testimony competent for the purpose, rightly understood and rightly appreciated: which of course is and must be that of Scripture and Scripture only.

### SECTION II.—*On the proof of the first proposition.*

I. That from the absolute epoch of the first act of creation downwards, there has been a succession of periods which Scripture calls *αἰῶνας*; the reader can now scarcely fail to perceive is and must be implied in the phrases Πρὸ τῶν αἰώνων[a]—'Απὸ τῶν αἰώνων[b]—Πρὸ χρόνων αἰωνίων[c]—Χρόνοις αἰωνίοις[d]—Κατὰ πρόθεσιν τῶν αἰώνων[e], respectively: all which recognise a series of *αἰῶνες*; implying of necessity that there must have been more than *one*. And since it has been shewn that, whatsoever be the particular form of the expression in each of these instances, the general meaning in all is the same, and virtually equivalent to πρὸ καταβολῆς κόσμου in some, and to ἀπὸ καταβολῆς κόσμου in the rest; it follows that the series of such *αἰῶνες* in all these allusions goes back to the point of duration denoted by καταβολὴ κόσμου at least.

II. This truth is still more clearly implied in the following passages of the Epistle to the Hebrews:

[a] 1 Cor. ii. 7. [b] Col. i. 26. [c] Tit. i. 2; 2 Tim. i. 9. [d] Rom. xvi. 25. [e] Ephes. iii. 11.

Heb. xi. 3.

*Πίστει νοοῦμεν κατηρτίσθαι τοὺς αἰῶνας ῥήματι Θεοῦ, εἰς τὸ μὴ ἐκ φαινομένων τὰ βλεπόμενα γεγονέναι.*

Heb. i. 1, 2.

*Πολυμερῶς καὶ πολυτρόπως πάλαι ὁ Θεὸς λαλήσας τοῖς πατράσιν ἐν τοῖς προφήταις ἐπ' ἐσχάτων τῶν ἡμερῶν τούτων ἐλάλησεν ἡμῖν ἐν υἱῷ, ὃν ἔθηκε κληρόνομον πάντων, δι' οὗ καὶ τοὺς αἰῶνας ἐποίησεν.*

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The first remark which may be made on these texts applies to both; that each speaks of these *αἰῶνες* as the proper subject of creation; and consequently as so many material subjects. Now if we render the word in each instance by *worlds*, this language appears to be natural and consistent. We need not observe accordingly that the same sense of propriety has determined both our own translators and the authors of every other version so to render the Greek in each instance. The common sense and common conviction on this point of all ages can scarcely be wrong: and we must infer, on the strength of this coincidence, that *αἰῶνες* neither has nor can have any other meaning in these two instances but that of *worlds*.

How then are we to reconcile such a meaning as this with what has been already demonstrated of the proper and primary signification of the word *αἰὼν* itself; a complex or comprehension simply of time, a greater or a lesser segment of duration, cut off from the rest and constituting time? There is no difficulty in this reconciliation. The idea of *time* and that of the *events* which happen in time; the idea of a course and succession of time, and that of what is transacted in it; the term of the existence of a particular subject, and the subject itself; an appointed period of being, and that for which it is appointed; an *αἰὼν* in short, as the proper measure of the duration of a world, and that world itself—these ideas are too closely connected not to be associated in one and the same act of apprehension; not to make the transition from one to the other a natural, an easy, and even an inevitable step.

It is obvious that in this secondary sense any one of these *αἰῶνες* must be considered a proper subject of creation: and

therefore that there never could be any impropriety in speaking of all collectively as *made*. But with respect to time in the abstract; we question whether this could be the case. By a very peculiar idiom time itself might possibly be spoken of as *created;* and time itself so far might be set forth as a material subject. And there is one text of Scripture which approaches to an idiom of this kind, though it is not an exact specimen of it: "I form the light, and create darkness[f]." All impropriety however, and even all appearance of impropriety, in the use of terms with reference to their particular meaning and application, vanishes as soon as it is understood that the subject of discourse in such cases is not time, but something which exists in time; something which was formed for time. There are only these two texts in which the proper word for creation is predicated of *αἰὼν* as the subject of creation: and *αἰὼν* being construed in each in the sense of *world*, both the act and the subject of the act are seen to be critically adapted one to the other.

This leads us to observe that in the first of these two texts the word actually employed is *κατηρτίσθαι*, in the second is *ποιεῖν*; the subject of both being the *αἰῶνες* in question alike. In the latter instance, explanation of the language itself appears to be almost superfluous. We must either understand at once the meaning of such a proposition as this, *δι᾽ οὗ καὶ τοὺς αἰῶνας ἐποίησεν*, or no explanation will make it intelligible. But with respect to the former the phraseology itself seems to require some explanation. *Κατηρτίσθαι* is not the same word as *ποιεῖν*; nor is the thing predicated of the *αἰῶνες* in this instance that they were *made*, but that they were *κατηρτισμένοι*.

If these words of Hebrews xi. 3 are to be literally translated, in our opinion it must be as follows: "By faith we comprehend that by a word of God the worlds have been fully prepared; so that the things which are seen have not come into being of things which appear." They assert a mystery, into which human reason never could have penetrated of itself; and which is even yet to mere human reason one of the greatest stumblingblocks which revelation has

[f] Isaiah xlv. 7.

proposed for the trial of faith *; a mystery which could be known only from inspiration; that of the production of all things out of nothing by the omnipotent word of God.

The verb καταρτίζω is compounded of κατὰ and ἀρτίζω; the latter of which occurs in its simple form, and ultimately is derivable from the adverb ἄρτι or the adjective ἄρτιος, meaning *fit, prepared, ready;* and if due allowance be made for the additional emphasis which ἀρτίζω, so derived, borrows from the preposition compounded with it; καταρτίζω signifies *fully* to prepare or make ready; to make ready, prepare, provide or fit up any thing, to the utmost extent of its capacity, to the utmost amount of its wants †.

When therefore it is asserted that the worlds themselves were thus κατηρτισμένοι by a word of God; the meaning is, That by one will and by one act of that one will of God, expressed by one word yet instantly followed by the effect, these worlds were placed at once in the integrity and in the perfection of their proper nature and constitution: they were provided, fully provided, with every thing of which they were capable, and every thing of which they stood in need, not only for their being but also for their well being. An astonishing conception of the work and process of creation! such as never could have presented itself to any but an inspired and divinely illuminated human understanding: yet the only one worthy of the Author of creation itself, the only one consistent with the acts and operations of the Infinite in power and wisdom; and no sooner submitted to our reason itself, than instinctively recognised by it to be most philosophical, most just, and most becoming.

With respect to the words which follow, εἰς τὸ μὴ ἐκ φαι-

* The example of Galen is a memorable proof of this. Galen had read the ancient Scriptures, particularly the books of Moses: and he was half a believer. But this doctrine of the creation of things out of nothing he expressly excepts to, as one which he could not receive.

† The reader may easily satisfy himself of this, by referring to those texts of the New Testament in which the word occurs; Matt. iv. 21: Mark i. 19: Matt. xxi. 16: Luke vi. 40: Rom. ix. 22: 1 Cor. i. 10: 2 Cor. ix. 5; xiii. 11: Gal. vi. 1: 1 Thess. iii. 10: Heb. x. 5; xiii. 21: 1 Pet. v. 10. Cf. also ἐξηρτισμένος, 2 Tim. iii. 17. Compare also, with the verb so used, the substantives derived from it, κατάρτισις, 2 Cor. xiii. 9; and καταρτισμὸς, Ephes. iv. 12.

*νομένων τὰ βλεπόμενα γεγονέναι*: they declare the inference, immediately deducible from the simple state of the case thus represented, as soon as it comes to be understood: viz. That, if the worlds were actually so produced, in all their integrity and all their perfection, fully fitted up and provided with every thing, by the word of God, they must have been produced at once and out of nothing. The things which are seen, (*τὰ βλεπόμενα*), could not have come into existence, could not have derived their being, *of* things which do appear (*ἐκ τῶν φαινομένων*), not even as their material cause, as supplying the materials out of which they were made. Τὰ *βλεπόμενα* takes in the complex of the *visible*, that is the *sensible* world; *τὰ φαινόμενα* is the complex of its elementary principles, out of which every thing in this sensible and visible universe has been formed, and into which it is ultimately resolvable again. It is asserted, lastly, that all this is understood, or rather *comprehended*, by faith: and no comment of our's can give any additional force to such an assertion as that.

iii. It is to be observed, on the second of these texts, that the production of the *αἰῶνες*, therein alluded to, is predicated of the Son. We are consequently bound to compare with this text of the Epistle to the Hebrews those other passages of the Christian Scriptures in which also creation is attributed to the Son: and that too not in a general manner only as it is here, but with a minuteness and particularity which leave no doubt that nothing *created*, nor any *where*, nothing which has truly derived its being from an act of creation, can possibly be excepted from the scope of that creation which is here in its universality attributed to the Son: especially with John i. 3: Ephes. iii. 15: Col. i. 15—17. It will follow that in the words *δι' οὗ καὶ τοὺς αἰῶνας ἐποίησε*, predicated of the Son, *all* creation must be intended, and *all* as the work of the Son; and therefore that the proper beginning of these *αἰῶνες* must be the proper beginning of creation. And this being the case; the truth of our first proposition, viz. that the succession of *αἰῶνες* in Scripture is that of so many worlds, and the primary or absolute epoch of these *αἰῶνες* is the primary or absolute epoch of these worlds also; follows as matter of course.

iv. And lastly, The general truth for which we are contend-

ing, that of a series of *αἰῶνες*, states of being, periods and complexes of duration, (whatsoever the number and whatsoever the magnitude of each,) each of them connected with its proper subject in the shape of some world; may be further inferred from that sublime ascription of praise to the Author of all these worlds, and therefore the Lord and King of all these worlds, which occurs in 1 Tim. i. 17: Τῷ *δὲ βασιλεῖ τῶν αἰώνων, ἀφθάρτῳ ἀοράτῳ μόνῳ σοφῷ Θεῷ, τιμὴ καὶ δόξα εἰς τοὺς αἰῶνας τῶν αἰώνων. ἀμήν.*

We are possibly now in a situation to enter more truly into the meaning of these words, and to feel and appreciate more sensibly and more correctly the nature of that idea which was probably present to the mind of St. Paul at this moment; and under the clear and distinct apprehension of which he burst out into this noble and sublime doxology. The idea of "the High and Lofty one, who inhabiteth eternity[g]—whose goings forth *have been* from old, from everlasting[h]—the Ancient of Days[i]—the Alpha and Omega[k]—Ὁ *ὢν καὶ ὁ ἦν καὶ ὁ ἐρχόμενος*[l]—the I AM or Jehovah[m]—in one word the Eternal; is no doubt familiar to the reader of the Old and of the New Testament: and at first sight we might be disposed to construe this allusion to the *βασιλεὺς τῶν αἰώνων*, as something of that kind; as an idiomatic way of expressing in Hebrew the ideas both of eternity and of sovereignty, inseparable from the Divine nature, and necessarily implied in the relation of the Creator to all created and inferior beings. In this case, *τῷ βασιλεῖ τῶν αἰώνων* would be virtually the same thing as *τῷ βασιλεῖ τῷ αἰωνίῳ.*

But had this been really the meaning of the apostle, it may be questioned whether both strict propriety in the association of ideas, and the Hebrew idiom, would not have required him to express that meaning by *τῷ βασιλεῖ τοῦ αἰῶνος*, not by *τῷ βασιλεῖ τῶν αἰώνων.* Eternity is a simple idea however vast and incomprehensible. It excludes the idea of parts or subdivisions. *Αἰὼν*, on the other hand, is something necessarily finite in itself, however great of its

g Isaiah lvii. 15: lxvi. 1. 2: xl. 28. lxiii. 16.
h Micah v. 2: Habakkuk i. 12: iii. 6. Ps. xc. 2: xciii. 2.
i Dan. vii. 9. 13. 22.
k Apocalypse, i. 8: 11: xxi. 6: xxii. 13.
l Ibid. i. 4. 8: iv. 8: xi. 17: xvi. 5.
m Exodus iii. 14.

kind. It is after all time, only indefinitely extended, or capable of being so. An *αἰὼν* supposed to be infinite would no longer be distinguishable from eternity itself: and in that case there could be no succession of *αἰῶνες*; there could be only one *αἰὼν* without beginning and without end. In this point of view, *τῷ βασιλεῖ τοῦ αἰῶνος*, in the sense of the Eternal King, would seem to be a legitimate association of ideas: but not *τῷ βασιλεῖ τῶν αἰώνων*, in the same sense also.

And with regard to the Hebrew idiom; there are repeated instances in the New Testament, in which, what would be exprest in our language, or in Greek, or in Latin, by an adjective derived from a substantive, in the same case as the substantive to which it was attached, that is, by an *epithet* of such a substantive, is exprest by a substantive of the same meaning as the adjective, in the genitive case, and either with or without the article, but almost always, as far as we have observed, in the singular number*. And this rule too

* Instances of the phrase in question without the article are Matt. xix. 28: xxv. 31: xxiv. 31: Rom. viii. 3. 36: xv. 8: James i. 25: 1 Pet. i. 14: 2 Pet. ii. 1. 10. 13. 15.

With the article, are Hebr. i. 3: Rom. vii. 24: viii. 21: James ii. 1: iii. 6: v. 15.

In what way this idiom serves the purpose of an adjective or epithet, one or two examples may shew: Ephes. iv. 13, *μέτρον ἡλικίας τοῦ πληρώματος*, "the stature of fulness"—"the *full* stature of Christ:" iv. 14, *μεθοδείαν τῆς πλάνης*, for *τὴν πλανῶσαν*, "making to go astray:" iv. 16, *ἀφῆς τῆς ἐπιχορηγίας*, for *ἐπιχορηγούσης*—"contributing its proper share of the common supply:" iv. 22, *ἐπιθυμίας τῆς ἀπάτης*, "lusts of deceit," "*deceitful* lusts:" iv. 29, *οἰκοδομὴν τῆς χρείας*, needful or convenient edification: v. 2, *εἰς ὀσμὴν εὐωδίας*, "a sweet-smelling savour: vi. 12, *κοσμοκρατόρας τοῦ σκότους*, "dark rulers of the world:" *πνευματικὰ τῆς πονηρίας—πονηρὰ πνεύματα*. Philipp. iii. 21, *τὸ σῶμα τῆς ταπεινώσεως ἡμῶν, τὸ σῶμα τὸ ταπεινὸν ἡμῶν: τῷ σώματι τῆς δόξης αὐτοῦ, τῷ σώματι τῷ ἐνδόξῳ αὐτοῦ*: Coloss. i. 5, *ἐν τῷ λόγῳ τῆς ἀληθείας τοῦ εὐαγγελίου, εν τῷ λόγῳ τῳ ἀληθεῖ τοῦ εὐαγγελίου*: i. 22, *ἐν τῷ σώματι τῆς σαρκὸς αὐτοῦ· ἐν τῷ σώματι τῷ σαρκίνῳ αὐτοῦ*: ii. 18, *νοὸς τῆς σαρκός.. νοὸς τοῦ σαρκικοῦ*, &c: ii. 11, *τοῦ σώματος τῶν ἁμαρτιῶν τῆς σαρκός*: not as our version renders it, "The body of the sins of the flesh," but "the body of flesh of sins," that is, "the fleshly body of sins."

Romans xvi. 26. we have *κατ' ἐπιταγὴν τοῦ αἰωνίου Θεοῦ*; not *τοῦ Θεοῦ τῶν αἰώνων*, or even *τοῦ αἰῶνος*—from which also we may infer that if St. Paul had meant to convey simply the idea of the eternity of the Deity in the text which we are considering, he would probably have expressed it by *τῷ βασιλεῖ τῷ αἰωνίῳ*.

would have required *τῷ βασιλεῖ τοῦ αἰῶνος*, not *τῷ βασιλεῖ τῶν αἰώνων*.

The doctrine of the actual series and succession of *αἰῶνες*, which we have been endeavouring to enucleate from Scripture, opens out a much more appropriate and striking view of the true meaning of this sublime apostrophe; by shewing us that the king of eternity must be the king of these *αἰῶνες* also; and therefore may be purposely here addressed as such. The existence of the Deity is indeed commensurate with the eternity of duration; and the essence of the Deity is coextensive with the immensity of space; and he is at once the universal and the everlasting King, and his kingdom is bounded neither by place nor by time. But what is that kingdom, which is merely universal because it extends through all space; and everlasting because it exists throughout all duration? Does not a kingdom imply dominions? and lordship subjects? Are there none such to be found in this universal and everlasting kingdom, but space and duration? How much more reasonable to conceive that there have been or may have been proper subjects of such a kingdom, if not from everlasting, yet from a point of duration which to our apprehensions may come within any imaginable limits of eternity itself! We conclude then that this designation of *ὁ βασιλεὺς τῶν αἰώνων* is much more probably intended to set forth the supreme Lord and King of heaven and earth, as what he is and always has been, from the time of the first act of creation at least, in his proper relation to the productions of his own goodness and wisdom and power, than simply as he is in himself; the unoriginated, the self-existent, the everlasting.

## SECTION III.— *On the proof of the second proposition.*

i. With regard to our second proposition that the last of these *αἰῶνες* of Scripture is the *αἰὼν* at present continuing and passing, and consequently that which must bear date from the epoch of the Mosaic creation; the first of the scriptural proofs of its truth is that numerous class of texts, collected supra [n], in which allusion occurs to *αἰὼν οὗτος, αἰὼν ὁ νῦν, αἰὼν ἐνεστώς*; in opposition to one past, or to one to

[n] Page 297. ii.

come. Such allusions must prove that an *αἰὼν*, in the scriptural sense of the term, a complex of time and being so called, is at present existing and at present passing; which cannot be the same with any thing of the same kind older than itself, nor with any thing of the same kind younger than itself because still to come; and yet is a real and actual one, as much as any thing of the same kind distinct from itself. The context of all such allusions implies that in point of fact this *αἰὼν* itself cannot be distinguishable from what we mean by the present world: and one of them[o] speaks of it as the course of this present world itself, *κατὰ τὸν αἰῶνα τοῦ κόσμου τούτου*. It follows that the beginning of this *αἰὼν* and that of the present world must be the same; and if the latter is the epoch of the Mosaic creation the former must be so too.

ii. With regard to the order of this *αἰὼν* in the succession of *αἰῶνες* in general; there are various texts of Scripture in which allusions occur to the end of a certain course of things previously in existence, under the name of the *ἔσχαται ἡμέραι*, the *καιρὸς ἔσχατος*, or the like. These we shall begin with collecting.

### *Ἔσχαται ἡμέραι, ἔσχατοι χρόνοι, ἔσχατος καιρὸς*, &c.

i. Acts ii. 17: Cf. Joel ii. 28, 29.

*Καὶ ἔσται ἐν ταῖς ἐσχάταις ἡμέραις (λέγει ὁ Θεὸς), ἐκχεῶ ἀπὸ τοῦ πνεύματός μου ἐπὶ πᾶσαν σάρκα.*

ii. James v. 3.

*Ἐθησαυρίσατε ἐν ἐσχάταις ἡμέραις.*

iii. Hebrews i. 1.

*Πολυμερῶς καὶ πολυτρόπως πάλαι ὁ Θεὸς λαλήσας τοῖς πατράσιν ἐν τοῖς προφήταις ἐπ' ἐσχάτων τῶν ἡμερῶν τούτων ἐλάλησεν ἡμῖν ἐν υἱῷ.*

iv. 1 Pet. i. 19, 20.

*Ἀλλὰ τιμίῳ αἵματι ὡς ἀμνοῦ ἀμώμου καὶ ἀσπίλου Χριστοῦ· προεγνωσμένου μὲν πρὸ καταβολῆς κόσμου, φανερωθέντος δὲ ἐπ' ἐσχάτων τῶν χρόνων δι' ὑμᾶς.*

[o] Ephes. ii. 2.

v. 1 Pet. i. 3, 4, 5.

*Εὐλογητὸς ὁ Θεὸς καὶ πατὴρ τοῦ Κυρίου ἡμῶν Ἰησοῦ Χριστοῦ, ὁ κατὰ τὸ πολὺ αὐτοῦ ἔλεος ἀναγεννήσας ἡμᾶς εἰς ἐλπίδα ζῶσαν δι' ἀναστάσεως Ἰησοῦ Χριστοῦ ἐκ νεκρῶν· εἰς κληρονομίαν ἄφθαρτον καὶ ἀμίαντον καὶ ἀμάραντον, τετηρημένην ἐν οὐρανοῖς εἰς ἡμᾶς, τοὺς ἐν δυνάμει Θεοῦ φρουρουμένους διὰ πίστεως εἰς σωτηρίαν ἑτοίμην ἀποκαλυφθῆναι ἐν καιρῷ ἐσχάτῳ.*

vi. 1 Tim. iv. 1.

*Τὸ δὲ πνεῦμα ῥητῶς λέγει ὅτι ἐν ὑστέροις καιροῖς ἀποστήσονταί τινες τῆς πίστεως.*

vii. 2 Tim. iii. 1.

*Τοῦτο δὲ γίνωσκε, ὅτι ἐν ἐσχάταις ἡμέραις ἐνστήσονται καιροὶ χαλεποί.*

viii. 2 Pet. iii. 3.

*Τοῦτο πρῶτον γινώσκοντες, ὅτι ἐλεύσονται ἐπ' ἐσχάτου τῶν ἡμερῶν ἐμπαῖκται, κ᾽, τ. λ.*

Jude 17, 18.

*Ὑμεῖς δὲ ἀγαπητοὶ μνήσθητε τῶν ῥημάτων τῶν προειρημένων ὑπὸ τῶν ἀποστόλων τοῦ Κυρίου ἡμῶν Ἰησοῦ Χριστοῦ· ὅτι ἔλεγον ὑμῖν ὅτι ἐν ἐσχάτῳ χρόνῳ ἔσονται ἐμπαῖκται, κ᾽, τ. λ.*

1 John ii. 18.

*Παιδία ἐσχάτη ὥρα ἐστί· καὶ καθὼς ἠκούσατε ὅτι ὁ Ἀντίχριστος ἔρχεται, καὶ νῦν ἀντίχριστοι πολλοὶ γεγόνασιν. ὅθεν γινώσκομεν ὅτι ἐσχάτη ὥρα ἐστίν.*

## SECTION IV.—*Remarks on the preceding texts.*

i. The occurrence of this phrase, *ἐπ' ἐσχάταις ἡμέραις*, or of others which resemble it, is not confined to the New Testament. It is found in the Old Testament also; as the first of the above passages themselves shews; being a quotation from the book of the prophet Joel. In the Old Testament the form of the phrase is most commonly, "In the latter days." But we need not stop at present to consider either the mode or the meaning of the expression as an idiom of the Old Testament *. The use made by St. Peter of the passage in Joel,

* This phrase of the "latter days," or "last days," occurs in Micah iv. 1, "But in the last days it shall come to pass *that* the mountain of the

and on the day of Pentecost, is sufficient to prove that the signification of the phrase in the Old Testament cannot be materially different from its meaning in the New; and that it is capable of as wide an application to the future there as in the New Testament itself; though commentators on the Old Testament have been too apt to suppose that the "latter days," in the phraseology of the Old Testament, has always a special and restricted reference to something future indeed, yet not more distant than the beginning of the Christian dispensation.

ii. These phrases cannot be confined to the personal times and personal experience of the apostles and of the other ministers of the gospel at the first promulgation of the Christian religion; as if those times were then arrived, or had begun in their lifetime. This appears from 2 Tim. iii. 1, 2 Pet. iii. 3, Jude 17, 18, in particular; in all which this last season or period, whatsoever it was, is represented as something still future, and, in reference to the time of the authors of those allusions to it, as comparatively still distant and remote.

iii. Yet some of these texts, on the other hand, (as Acts ii. 17, James v. 3, 1 Pet. i. 20 : 5, and in particular, Hebrews i. 1, in which the form of the phrase is ἐπ' ἐσχάτων τῶν ἡμερῶν τούτων,) would lead to the inference that these latter days must have been already come when those sentiments were exprest and those passages were penned. On this principle they were both come in one sense and with one relation, and

Lord's house," &c.: and also in Isaiah ii. 2. The Hebrew in both is "Baeerith deïmim," "in the latter end of days." In our opinion, the millennary period is intended in each; and that will be literally the "end of days" or the "latter days." The same season is described and designated in Daniel by the "latter days," ii. 28, 29; x. 14: by the "time of the end," viii. 17. 19. 23; xi. 35. 40; xii. 4. 9: and by the "end of the days," xii. 13. And a time, probably still later, is intimated by the same phrase in the form of the "latter years," as well as of the "latter days," Ezekiel xxxviii. 8. 16, of Gog and Magog.

The first instance of the phrase, (and probably with the same reference to the millennary period,) which occurs in the Old Testament, is Gen. xlix. 1; the next, Job xix. 25, Numbers xxiv. 14; and the next to that, Deut. iv. 30: xxxi. 29: after which we find it only in the prophets; in the passages above quoted; and in Jeremiah xxiii. 20; xxx. 24.

not come in another and with another, each at the same time; and even that would be possible without inconsistency, if these latter days were both part of a larger and longer complex of duration in general, and yet considerable enough in themselves to constitute no small part of the whole; the beginning and the end of which, however necessarily connected together, must yet *de facto* be very remote from each other; so that these days, in the sense of this one period in general, referred to their beginning at a given time might be said to be already come—referred to their end or consummation might be said to be still distant and yet to come.

iv. It appears further from such of these passages as Acts ii. 17, 1 Pet. i. 5, 20, and especially Hebrews i. 1, that the actual commencement of these ἔσχαται ἡμέραι could not have been later than the actual appearance of Jesus Christ, and the actual first publication of the gospel: in other words, that the beginning of these latter days, and that of the Christian dispensation, properly so called, were synchronous. And this is further to be collected from the last of the texts in our list, 1 John ii. 18: if ἐσχάτη ὥρα, which occurs in that, may be understood to be synonymous with ἔσχαται ἡμέραι, ἔσχατος χρόνος, ἔσχατος καιρὸς in the rest.

On two assumptions, neither of which can reasonably be disputed, the reasoning in this text of the Epistle of St. John is good: i. That the antichrist could not appear until after the true Christ at least had appeared also: and if he must be manifested, even when he did appear, in the name and under the character of the true Christ, falsely assumed for the purpose of deceiving [p], the truth of this supposition is self-evident. ii. That even the true Christ, much more the antichrist, was not to appear until the latter days; until the time of the end.

On these two assumptions, the fact asserted in the text, as the ground of the inference that it was even then the *last hour,* viz. the appearance of many antichrists already, must be allowed to lead to that conclusion; whether these antichrists are understood of Christian heresiarchs of various kinds, (which is most probable,) or of such false Christs as

[p] See the Exposition of the Parables, i. 372; ii. 542.

had repeatedly appeared among the Jews before this Epistle was written; which would be possible too. And either of these constructions would be agreeable to the language employed in speaking of these antichrists, which appears to be simply historical, *ἀντίχριστοι πολλοὶ γεγόνασι,* "There have been many antichrists," or, "Many have become antichrists."

As to the particular designation of this latter period by *ἐσχάτη ὥρα,* it may be significant; and probably is so. All that we will observe upon it at present is That, so far as we have been able to draw any inference from the intimations of Scripture on this subject, the antichrist himself has his time[q], and a time not yet arrived; but a time which, when it does arrive, will closely confine on the time of the end, (in some sense or other at least,) and will be the strongest and clearest intimation itself of the approach of the end; if men are only watchful and on the alert to make a due use of such a warning; and only retain enough of their faith in the true Christ not to be deceived and deluded by the impostor who wears his mask. And then it may be argued with literal truth, from the fact of such an appearance itself, *ὅτι ἐσχάτη ὥρα ἐστί**.

v. There is also a class of texts in which too allusion occurs to the *ἐσχάτη ἡμέρα*; but as it is always in connection with the resurrection and the final judgment, *ἐσχάτη ἡμέρα* in these instances must be literally understood of the last or concluding day of the present world. They occur in the Gospel of St. John; and most of them are from the mouth of our Lord himself, which must give them additional force and solemnity.

### Ἐσχάτη ἡμέρα.

### i. John vi. 39, 40.

*Τοῦτο δέ ἐστι τὸ θέλημα τοῦ πέμψαντός με πατρὸς, ἵνα πᾶν ὃ δέδωκέ μοι μὴ ἀπολέσω ἐξ αὐτοῦ, ἀλλὰ ἀναστήσω αὐτὸ ἐν τῇ ἐσχάτῃ ἡμέρᾳ. τοῦτο δέ ἐστι τὸ θέλημα τοῦ πέμψαντός με, ἵνα πᾶς ὁ θεω-*

* A comparison however of 1 Cor. vii. 29; vi. 1: 1 Thess. iv. 15–17; v. 4–7: Rom. xiii. 11: 1 Pet. iv. 7; v. 1, will shew that the sacred penmen might and do speak of very distant events, humanly considered, as close at hand.

q 2 Thess. ii. 6–9; 2, 3: 1 Thess. v. 1: 1 John iv. 3: 2 John 7.

*ρῶν τὸν υἱὸν καὶ πιστεύων εἰς αὐτὸν ἔχῃ ζωὴν αἰώνιον, καὶ ἀναστήσω αὐτὸν ἐγὼ ἐν τῇ ἐσχάτῃ ἡμέρᾳ.*

ii. John vi. 44.

*Οὐδεὶς δύναται ἐλθεῖν πρὸς μὲ, ἐὰν μὴ ὁ πατὴρ ὁ πέμψας με ἑλκύσῃ αὐτὸν, καὶ ἐγὼ ἀναστήσω αὐτὸν τῇ ἐσχάτῃ ἡμέρᾳ.*

iii. John vi. 54.

*Ὁ τρώγων μου τὴν σάρκα καὶ πίνων μου τὸ αἷμα ἔχει ζωὴν αἰώνιον· καὶ ἐγὼ ἀναστήσω αὐτὸν ἐν τῇ ἐσχάτῃ ἡμέρᾳ.*

iv. John xii. 48.

*Ὁ ἀθετῶν ἐμὲ καὶ μὴ λαμβάνων τὰ ῥήματά μου ἔχει τὸν κρίνοντα αὐτόν· ὁ λόγος ὃν ἐλάλησα ἐκεῖνος κρινεῖ αὐτὸν τῇ ἐσχάτῃ ἡμέρᾳ.*

v. John xi. 24.

*Λέγει αὐτῷ* Μάρθα· *Οἶδα ὅτι ἀναστήσεται ἐν τῇ ἀναστάσει ἐν τῇ ἐσχάτῃ ἡμέρᾳ.*

To these we may add 1 Cor. xv. 51, 52: *Ἰδοὺ μυστήριον ὑμῖν λέγω· πάντες μὲν οὐ κοιμηθησόμεθα· πάντες δὲ ἀλλαγησόμεθα, ἐν ἀτόμῳ ἐν ῥιπῇ ὀφθαλμοῦ ἐν τῇ ἐσχάτῃ σάλπιγγι*[r].

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There are also in Scripture allusions to *a day*, as *ἡ ἡμέρα*, absolutely, (in the forensic sense of such a term,) as *ἡμέρα ἐκείνη, ἡμέρα μεγάλη, ἡμέρα* Χριστοῦ, *ἡμέρα* Κυρίου, *ἡμέρα* Θεοῦ, *ἡμέρα κρίσεως, ἡμέρα ἐπισκοπῆς, ἡμέρα ὀργῆς*: phrases and denominations which speak for themselves, and proclaim this day also, as the day of judgment, the day of visitation, the day of retribution, the day of doom, to be meant of the last and closing scene of this long continuing state of probation. But as in none of these instances is this day expressly characterised by the epithet *ἐσχάτη*, and so referred to its proper place in the order and succession of time, as supposed to have gone on in the same way and without interruption until then, we think it sufficient to refer to these passages[s], without quoting them.

[r] Cf. Acts xvii. 31.

[s] 1 Cor. iii. 13: Romans xiii. 12: 1 Th. v. 4: Heb. x. 25: Matt. vii. 22; xxiv. 36 (50. xxv. 13): Mark xiii. 32: Luke x. 12; xxi. 34: 2 Thess. i. 10: 2 Tim. i. 12 (18. iv. 8): Jude 6: Apocalypsis vi. 17.
Luke xvii. 22. 24 (30, 31): Philipp. i. 6 (10, ii. 16): Acts ii. 20: 2 Thess. ii. 2: 1 Cor. i. 8: 2 Cor. i. 14: 1 Thess. v. 2: 2 Peter iii. 10: Rom. ii. 16: 2 Peter iii. 12: Matt. x. 15; xi. 22. 24; xii. 36: 2 Peter ii. 9; iii. 7: 1 John iv. 17: 1 Peter ii. 12: Rom. ii. 5: Acts xvii. 31.

## SECTION V.—*On the συντέλεια τοῦ αἰῶνος of Scripture.*

There are texts of Scripture too, which speak of a *συντέλεια τοῦ αἰῶνος* in general; and others which speak of a *συντέλεια τοῦ αἰῶνος τούτου* in particular. The context in all these instances shews that this *αἰὼν* is our own; the course and continuance of the present state and present system of things, so long as it is permitted to endure: the epoch of which is the Mosaic creation.

i. Matt. xiii. 39.

Ὁ δὲ *θερισμὸς συντέλεια τοῦ αἰῶνός ἐστιν· οἱ δὲ θερισταὶ ἄγγελοί εἰσιν, κ᾽, τ. λ.*

ii. Matt. xiii. 40.

*Ὥσπερ οὖν συλλέγεται τὰ ζιζάνια, καὶ πυρὶ κατακαίεται, οὕτως ἔσται ἐν τῇ συντελείᾳ τοῦ αἰῶνος τούτου.*

iii. Matt. xiii. 49.

Οὕ*τως ἔσται ἐν τῇ συντελείᾳ τοῦ αἰῶνος· ἐξελεύσονται οἱ ἄγγελοι, κ᾽, τ. λ.*

iv. Matt. xxiv. 3.

Εἰ*πὲ ἡμῖν, πότε ἔσται ταῦτα; καὶ τί τὸ σημεῖον τῆς σῆς παρουσίας, καὶ τῆς συντελείας τοῦ αἰῶνος;*

v. Matt. xxviii. 20.

Καὶ *ἰδοὺ ἐγὼ μεθ᾽ ὑμῶν εἰμὶ πάσας τὰς ἡμέρας ἕως τῆς συντελείας τοῦ αἰῶνος. Ἀμήν.*

From all these passages, whatsoever be the form and manner of the phraseology, the inference is the same; that the Mosaic creation, the world which has been since the beginning of that creation, and which now is, with its prescribed period of duration, is one of the series of Scripture æons; which in contradistinction to all that have preceded it, and all that are older than it, is *αἰὼν ὁ νῦν, αἰὼν οὗτος, αἰὼν ὁ ἐνεστὼς*, and so far the last of all: that either the whole of this æon in particular, in comparison of the entire decursus of such æons from first to last, is to be called the *ἔσχαται ἡμέραι*, the *ὕστεροι καιροὶ*, the *ἔσχατοι χρόνοι*, the *ἔσχατος καιρὸς*, the *ἔσχατοι καιροὶ*, the *ἐσχάτη ὥρα*, or some determinate part of it in comparison of the whole; but still a part

which does not bear date later than the personal appearance of Jesus Christ, in the proper discharge of his mission, and the formal commencement of the Christian dispensation: that even this *αἰὼν* has its *ἐσχάτη ἡμέρα*, in relation to itself and its own decursus, which can neither be antedated before its time nor postponed beyond its time; and that its proper consummation in this sense is the day of the general resurrection, the day of the general judgment, and the day of final doom.

This being the case, we observe in the last place that there are still two texts, not yet produced, which define the place of this present and passing *αἰὼν* in particular in the order and succession of such *αἰῶνες* in general; and while they recognise it as one of the number shew also that it is the *last*. It is the end of the series of which it makes *one*.

i. 1 Cor. x. 11.

*Ταῦτα δὲ πάντα τύποι συνέβαινον ἐκείνοις· ἐγράφη δὲ πρὸς νουθεσίαν ἡμῶν, εἰς οὓς τὰ τέλη τῶν αἰώνων κατήντησεν.*

ii. Hebrews ix. 25.

*Οὐδ᾽ ἵνα πολλάκις προσφέρῃ ἑαυτὸν, ὥσπερ ὁ ἀρχιερεὺς εἰσέρχεται εἰς τὰ ἅγια κατ᾽ ἐνιαυτὸν ἐν αἵματι ἀλλοτρίῳ· ἐπεὶ ἔδει αὐτὸν πολλάκις παθεῖν ἀπὸ καταβολῆς κόσμου· νῦν δὲ ἅπαξ ἐπὶ συντελείᾳ τῶν αἰώνων εἰς ἀθέτησιν ἁμαρτίας διὰ τῆς θυσίας αὐτοῦ πεφανέρωται.*

It is peculiar to these two passages to speak of *τὰ τέλη τῶν αἰώνων*, and *ἡ συντέλεια τῶν αἰώνων*. Between *τέλη τῶν αἰώνων* and *συντέλεια τῶν αἰώνων*, there is only a verbal difference; and in every other instance the latter is *συντέλεια τοῦ αἰῶνος*. St. Paul recognises these *τέλη τῶν αἰώνων* as arrived in his time, and in that of those whom he is addressing; the author to the Hebrews speaks of the *συντέλεια τῶν αἰώνων* in general as synchronous with the time of the sacrifice of Jesus Christ: and both these designations of the time of their arrival are virtually the same.

In this mode of speaking of them however it must be implied that these *αἰῶνες* had their *ends*, their particular term and period; which must come in somebody's time, and *de facto* had come in the time of St. Paul and of his contemporaries. It follows that if the *ends* of these *αἰῶνες* were

already arrived at this juncture, and yet in their proper relation to the whole decursus and duration of such *αἰῶνες* previously, i. e. while one of the number was still only passing and current, and not yet complete; this *one* must be the *last* of all. The ends of all must meet in this one. All must be summed up and all must be concluded in this one.

## CHAPTER IV.

*On the inferences deducible from the preceding conclusions, relating to various points.*

### SECTION I.—*True extent of the chronology of Scripture; and its utter incommensurability with that of any chronology of human invention.*

ENOUGH we trust has now been done, with the Divine blessing on our inquiries, to give the reader a general but still a clear and distinct idea of the real extent of that scheme of time, which has always been revealed in Scripture; whether the readers of Scripture have hitherto understood and appreciated it rightly or not. Contrasted with this in all its magnitude, the most false and exaggerated systems of mere human invention dwindle into absolute insignificance; shrink into the infinitesimal proportion of a mathematical point. In comparison of this, the chronology of Egypt, of Babylon, of Phœnicia, of Persia, of India, of China, of Cathay or Tartary, enormously disproportionate to the truth as it is in itself, is no more than the little finger of the Rhodian colossus, or the smallest square of the great pyramid of Gizeh; perhaps not so much as a drop of water in comparison of the ocean, or one of those atoms, which can neither be seen nor felt nor weighed nor measured, though they make up the material world, compared with the mass of that world itself. Nothing which men have contrived to exaggerate their own antiquity, false and unscrupulous as it may have been in itself, has come within even conceivable limits of that vast and gigantic scheme of duration, measured by time, which has always been legibly written on the pages of Scripture;

whether either its friends or its enemies have read it there or not. It is time however that we should proceed to apply our conclusions to their natural consequences; sufficient having been done, as we hope, to serve for the foundation of various legitimate inferences: with the statement and explanation of which we shall conclude the present dissertation.

### SECTION II.—i. *On the true reference of* Gen. i. 1. *to the order and succession of things before and after.*

The first of these inferences, which we think it necessary to specify, is the relation of Gen. i. 1. to the order, decursus, and succession of this system of Scripture chronology in general. Much has been conjectured and much has been proposed concerning the meaning of these words, "In the beginning God created the heaven and the earth," or as it is in the Hebrew, "the heavens and the earth;" but there are only two constructions of the text which we feel it incumbent upon us to notice at present: *one*, that which refers the allusion implied in the words "In the beginning" to the absolute commencement of creation in general; *the other*, that which takes it in relation to the context, and consequently restricts it to the beginning of that creation, the account of which is immediately subjoined.

The former of these supposes an indefinite interval of time between the *first* and the *second* verse of the chapter: the latter no interval at all. The former so construes the word *created* as to make it necessarily imply the production of things out of nothing: the latter puts no such construction on that particular term, and yet understands it even here of a proper act of creation; and of a proper subject of that act also.

Now with respect to these two constructions, i. it is agreed among Hebrew scholars that the word *bera*, here rendered *created*, does not carry *virtute termini* any such additional meaning as *this* of *creation out of nothing*: that it might be so used indeed, and very properly; but that it might also be used and that it is actually used of such a creation as the formation of things out of preexisting materials; that it might be used and actually is so in the general sense of *ase* to make, (ποιεῖν in Greek,) and in the particular sense of *itsar* to form (πλάσσειν in Greek): in one

word that creation, as predicated by means of this word of such and such acts of the Divine power, according to the idiom of scripture is *creation*, whether a double act of that kind is implied thereby, (the production of the matter or substance of things in the first place, and that of their forms and specific distinctions in the next,) or only *one;* i. e. the formation of every thing, which made from the first an actual part of an actual system of things, out of preexisting materials.

ii. There are texts of Scripture, as we have seen, which do go back to the epoch of all creation, and therefore to that of the production of the ὕλη or matter of creation itself; of which Hebrews xi. 3, already considered, is the most remarkable: and there are references in Scripture to "the beginning," which cannot be limited to any point of time short of that of the absolute commencement of the process of creation itself. Such are the phrases ἐν ἀρχῇ[t], ἀρχὴ κόσμου and ἀρχὴ κτίσεως[u], κατ' ἀρχὰς[x], ἀπ' ἀρχῆς[y], ἀρχὴ absolutely[z], and ἡ ἀρχή[a]: in all which ἀρχὴ is only the Greek form of the Hebrew *rassith;* and ἐν ἀρχῇ is the same as *be-rassith*, Gen. i. 1. There are instances again of the same mode of speaking, in which the same phrase is employed, yet the reference implied by it cannot go further back than the epoch of the Mosaic creation: ἀπ' ἀρχῆς[b], and ἀπὸ δὲ ἀρχῆς κτίσεως[c].

This being the case, the actual reference implied in the use of such language in a particular instance must be determined by the context. Tried by this rule Gen. i. 1 cannot possibly refer to any thing which had preceded; and therefore it must do so to what follows. "The beginning," in the allusion so ushered in, is that beginning which follows; and is related historically directly after. It can have nothing to do with any thing prior to that: nothing historically at least, nothing professedly. "The beginning" here is the first point of time *at* which and *from* which that system of things, of which the account follows, could be said to have an actual existence. It is the first day of the hexaëmeron:

[t] John i. 1, 2: cf. xv. 27: 1 John ii. 7, 24: iii. 11: 2 John 5, 6.
[u] Matt. xxiv. 21: Mark xiii. 19.
[x] Hebrews i. 10.
[y] 1 John i. 1: ii. 13, 14.
[z] Coloss i. 18.
[a] Apocal. iii. 14.
[b] Matt. xix. 4, 8: John viii. 44: 1 John iii. 8.
[c] Mark x. 6: 2 Pet. iii. 4.

or, at the utmost, it is that point in antecedent duration which was immediately prior to it.

iii. The true reference of the beginning, thus predicated of our own system, to any thing of the same kind older than itself, is not to be collected from this first verse of the book of Genesis, but from the account given of the work of the fourth day and of that of the three preceding days. The fact is certain, that *annual* time, measured by the revolution of the earth in the ecliptic, and consequently round the sun, from the mean vernal equinox to the mean vernal equinox perpetually, began on the *first* day of the hexaëmeron: and yet it is also certain that the sun itself did not appear until the *fourth* day. It follows that, though the sun itself might not be visible on the first day, the *matter* of the sun must have been in existence even *then;* and must have been serving the same purpose as the centre of attraction to the material mass of the earth even then. If so, both the sun and the earth were older than the first day of the Mosaic creation.

Besides this, forasmuch as the material universe, for any thing which we ourselves can perceive to the contrary, consists of nothing but the earth and the stars, (the sun and the moon and the planets being all included under this general name of the stars,) if the stars are older than the Mosaic creation, the material universe in the complex must be older too. The testimony of Job xxxviii. 7, figuratively expressed as it is, must be demonstrative that the stars, (all of them without exception, properly so called, distinct from our own sun,) were older than that creation, the beginning of which they are thus represented as welcoming and ushering in.

The testimony even of Gen. i. 16 will imply the same thing too; if the latter part of that verse is rendered simply as it is in the original, without supplying the word *made,* which is not in the Hebrew; but merely after the statement, just premised, of the creation of the sun and the moon, (whatsoever was to be understood by that creation,) for such and such a purpose,—“ and the stars.” For the just and legitimate inference from this allusion to the stars, after the sun and

the moon, is not that they too were now first made, even in that sense in which the sun and the moon might be said to have been then first made; nor that they too were then first disposed or *set* in the heavens for that use and purpose, for which the sun and the moon are said to have been so disposed and set as soon as made; but that they were *sometime* so made and *sometime* so disposed. The allusion to the stars, whether as made or as disposed and ordained in order to give light, is *indefinite*: and it must be indefinitely understood *. It is manifest that we have no right to restrict such an indefinite allusion; (and especially in such a case as this;) in any manner whatsoever. We are bound to receive and to construe it, in its application to the stars, as generally as it is proposed. It tells us nothing of the time when the stars in particular were first made; or first disposed for such and such an use and purpose. But it tells us as plainly as words can do so, and in the most comprehensive and unqualified manner, that, whensoever they were so made or so disposed, it was by the same Maker and Creator who made

* It is not certain that even our translators intended to imply by their version that the stars were *made* at this time, even in the sense in which the sun and the moon might be supposed to have been so. We should not be justified therefore in assuming that they did. The allusion to the stars may stand *parenthetically* and *independently* in their version, as much as in the original.

The creation of the stars is every where in Scripture attributed to the same Power and Godhead which created the sun and the moon and the earth. See Amos v. 8: Job ix. 9: Ps. viii. 3: cxlvii. 4: Isaiah xl. 26: Ps. cxlviii. 3: Isaiah xlv. 12: Jeremiah xxxiii. 22: Job xxvi. 13. Hence, his title, as the Lord of Sabaoth or Hŏsts; and that of the stars as the host or armies of heaven: Dan. iv. 35: viii. 13. And as the stars have never in reality fulfilled any purpose in reference to the earth, except that of giving light, and of serving as a measure of time, or as an indication of the seasons; so are they no where in Scripture represented as ordained for any other purpose relatively to the earth. See in particular, Deut. iv. 19: Ps. cxxxvi. 7–9: Jeremiah xxxi. 35: xxxiii. 25: Ps. viii. 3: Job ix. 7: xxxviii. 33.

If the belief respecting Sirius, to which we adverted on a former occasion, (Diss. ix. chap. i. section ii. supra, p. 6, 7.) as supposed to have been in the ascendant at the time of the creation of our own world, was founded on a primitive tradition to that effect, it would be demonstrative proof that *one* of the fixed stars at least must have been older than the Mosaic creation.

and disposed of our own sun and moon themselves. This was all which it concerned us to know; viz. that the Maker of our own world was the Maker of the stars also.

## SECTION III.—ii. *On the discoveries of Geology; and on their bearing upon the chronology of Scripture.*

And here it will probably occur to the reader, who knows any thing of the progress of modern science, that this would be the proper time and place to notice the discoveries of geology; were it practicable, without digressing much too far from the scope and business of our own work, to enter on so wide and extensive a subject. But the utmost which we can say with propriety on this subject is that geology has certainly brought facts to light, which appear to lead directly to the inference that both the matter and the form of our own earth must be much older than the Mosaic creation: facts which imply that it must have passed through successive states of being, different from and anterior to that in which it exists at present: each too requiring a corresponding interval of time, possibly even of indefinite extent.

The science of geology must still be considered very incomplete: and, from the nature of the case, to define the limits between one of these states of the existence of the earth and another, or to assign the chronological boundaries of each in terms of any measure of duration familiar to ourselves, may have been attempted indeed by hasty and precipitate reasoners, but is more than any sensible and judicious geologist would venture to do. Still, sufficient has been ascertained to convince us of the general truth, that mankind are sojourning at present, and always have been, on the surface of a globe, which externally and in some of its features exhibits the marks of an antiquity no greater than their own; in other peculiarities of its construction, and in other phenomena likewise displayed by it, holds out palpable proofs of an antiquity of its own, incomparably greater than theirs: especially when its interior is explored, and the order, distinctions, and mutual relations of the strata of which it is found to consist, and the almost innumerable and incalculable remains both of animal and of vegetable life, mixed up

with the other materials of which it is composed at present, are taken into account.

It was not possible for the geologist to shut his eyes against the evidence of his senses; and it was scarcely to be expected but that he would reason in some manner or other upon the phenomena thus brought to light. The consequence has been that less scrupulous inquirers, who never thought much of Scripture at any time, have drawn their own conclusions from these facts, without caring whether they could be reconciled to Scripture itself or not; and, if the truth must be spoken, in the genuine spirit of scepticism, which leans to its own reason even when it appears to contradict revelation; and the more so, because it contradicts it: while those on the other hand, who would not surrender their belief in Scripture even to the evidence of their own senses, have been greatly perplexed to reconcile the phenomena of sense in this one department with the truth of revelation; according to the usual mode at least of understanding and explaining it.

The conjectures which have been proposed for this purpose have no doubt been suggested by a sense of their necessity, and have had a very desirable end in view; but they appear to us to be objectionable: whether it be the hypothesis of the formation of all things, both within and without our globe, exactly in the state in which they are found at present; or that of an indefinite interval of duration between the first and the second verses of the first chapter of Genesis; or that of an indefinite enlargement of the meaning of the word *day*, as used of each of the six days of the hexaëmeron; and consequently of the measure of time implied thereby. The final end of each of these hypotheses is either to account for every thing which exists and as it exists at present by one act of creation, which need not go further back than the epoch of the Mosaic; or to allow time sufficient to bring all such changes to pass by natural laws of some kind, both in the interior and in the exterior structure of our own earth, between the first act of creation and the beginning of the Mosaic. We cannot however stop at present to point out the objections to each of these suppositions. Our own work,

as far as it has yet proceeded, sufficiently confutes the last of them; which is contradicted by the testimony of time itself. The consequence of all these apparent inconsistencies is that the science of geology, (if it may yet be called a science,) has suffered, (not altogether without reason, yet more from the fault of its professors than its own,) in the estimation of pious minds. It has become an object of suspicion and distrust; as if its necessary tendency was to encourage the spirit of scepticism: and as if an implicit belief in the scriptural account of the origin of things, and proficiency in this new science, could not subsist together.

The conduct indeed of many modern geologists has been well calculated to bring discredit on their own science. They have studied it in the spirit of scepticism; careless of any offence which they might thereby occasion to the friends of revelation; indifferent too to the consequences of their own researches to the truth of Scripture; perhaps secretly animated by the hope of establishing facts, the chief recommendation of which should be that they were contradictory to Scripture. In the hands of such men, geology has been ancillary to infidelity, even when it has brought nothing but truth to light; and such inquirers themselves, though labourers in the cause of truth, must be treated as the enemies of revelation. It is most certain however, that truth of one kind never can be inconsistent with truth of another; that sound science and genuine philosophy will never be found at variance with revelation; and that human reason, except when perverted and led astray by its own prejudices, will never be committed to any unnatural contest with faith.

The foundation of this seeming incompatibility between the discoveries of geology and the doctrine of Scripture is that one prejudice, in which both the friends and the enemies of revelation hitherto appear to have concurred alike; that the epoch of the Mosaic creation is the absolute epoch of creation itself. There is no authority in Scripture for any such supposition. It is the doctrine of Scripture, rightly understood, that the Mosaic creation instead of being the first is in reality the last: that, if there has not been an indefinite succession of creations before this, there has been at least a definite succession of *αἰῶνες*—periods and complexes

of time, denoted by this term *αἰὼν*, whatsoever be really implied thereby, of which the Mosaic *αἰὼν* is only one, yet that one the last of all. It follows that the Mosaic creation can go no further back than the beginning of the Mosaic *αἰών*; and, if Gen. i. 1 is the beginning of the Mosaic creation, it is also the beginning of the Mosaic *αἰών*.

The discoveries of geology, properly so called, in each of the kingdoms of nature, belong to the ante-Mosaic æra: and, as referred to that æra, instead of contradicting Scripture, they illustrate it, and make it clearer and more intelligible. They demonstrate that the soundest and most legitimate inferences from the testimony of Scripture itself, with respect to a state and condition of being older than the Mosaic creation, through which our planet must have passed, are confirmed by the matter of fact and by the evidence of sense. If there are difficulties notwithstanding, connected with these discoveries, they are of a different kind. They relate to a totally distinct question; that of the origin of evil, or of the mixture of evil with good in the works of one and the same Creator, discoverable wheresoever men can explore and examine those works for themselves.

Upon this question in particular we have already declared our own opinion [d], that the appearance of evil, wheresoever it is to be found, is the evidence of sin: and could research and discovery carry us to a point beyond the origin of sin we should perceive no traces of evil any longer. But sin is not necessarily the sin of man. Sin is the evidence of a *fall*: and there has been a fall of the angels as well as a fall of man, and the one much older than the other too [e]. In this manner, geology may serve to illustrate one of the most esoteric and mysterious doctrines of Scripture, as well as its chronology; by bringing to light the evidences of the fall of the angels, long anterior to the existence of our own world: though its natural use in subserviency to Scripture is to illustrate its chronology, and its doctrine of the succession of æons.

[d] Supra, p. 311.

[e] Cf. Ezekiel xxviii. 11–17.

## SECTION IV.—iii. *Construction of* 2 Peter iii. 3—7.

We are gradually led by the course of our reflections on this subject to observe that there is actually a passage of Scripture which bears directly on the question of this subserviency; for which reason we have purposely reserved it for a distinct consideration in this place. It is 2 Pet. iii. 3—7.

*Τοῦτο πρῶτον γινώσκοντες, ὅτι ἐλεύσονται ἐπ' ἐσχάτου τῶν ἡμερῶν ἐμπαῖκται, κατὰ τὰς ἰδίας αὐτῶν ἐπιθυμίας πορευόμενοι, καὶ λέγοντες· Ποῦ ἐστιν ἡ ἐπαγγελία τῆς παρουσίας αὐτοῦ; ἀφ' ἧς γὰρ οἱ πατέρες ἐκοιμήθησαν πάντα οὕτω διαμένει ἀπ' ἀρχῆς κτίσεως*[f]. *λανθάνει γὰρ αὐτοὺς τοῦτο θέλοντας ὅτι οὐρανοὶ ἦσαν ἔκπαλαι καὶ γῆ ἐξ ὕδατος καὶ δι' ὕδατος συνεστῶσα τῷ τοῦ Θεοῦ λόγῳ· δι' ὧν ὁ τότε κόσμος ὕδατι κατακλυσθεὶς ἀπώλετο· οἱ δὲ νῦν οὐρανοὶ καὶ ἡ γῆ αὐτοῦ λόγῳ τεθησαυρισμένοι εἰσὶ, πυρὶ τηρούμενοι εἰς ἡμέραν κρίσεως καὶ ἀπωλείας τῶν ἀσεβῶν ἀνθρώπων.*

i. The first remark to be made on this passage is that, if additional weight can be given to a declaration of *one* inspired author by its being adopted and reiterated by *another*, such additional authority is given to this testimony of St. Peter's by Jude 17, 18; which quotes the commencement of it, and therefore virtually repeats the whole.

ii. The subject of discourse in this and in the preceding chapter of the Epistle is the *παρουσία* of Jesus Christ, the reappearance of Jesus Christ in person, the final judgment, and the close of the existing state of things[g]. The proper answer to the demand of these mockers of the last times, who are supposed to question the truth of this doctrine, and to ask, as if in contempt of it, "Where is the promise of his coming?" is found in ver. 8—10; in which the readers of the Epistle are reminded that God did not reckon time according to the human rule; that a thousand years with him were as one day, and one day as a thousand years; and that the day of the Lord should come at last when it was least expected, and as if by stealth, like a thief in the night; the more effectually to take all by surprise.

This we say is the proper answer to the taunt or objection founded on the fact of so long a delay between a supposed promise or assurance of a certain event, and its fulfilment or

[f] Cf. Ezek. xii. 22. [g] Cf. 1 Tim. vi. 15.

arrival. The point of this objection however is aggravated by a further contrast between the supposed inconsistency of the event itself and the continuance of one and the same order and course of things from a much longer time back than the date of this prediction of its consummation; even from the day that the fathers themselves fell asleep; which is virtually from the beginning of the world: for these fathers are all of mankind, who had ever lived before the time of these mockers themselves; especially the first of the number. The answer to this objection in particular is contained in ver. 5—7: the substance of which may be represented as follows:

"That worlds or states of being, before the present, had also existed, in which all things had gone on in the same uniform manner in which they appeared to be going on in the present, while such worlds lasted; and yet they had come to an end at last, they had passed away and disappeared, and had been succeeded by new: that such was destined to be the case with the present state of things also, and such should some time prove to be the case with it: that these mockers themselves, who thus appealed to the uninterrupted continuance of the same order and course of things from as far back as human memory could trace it, in proof of its being formed for perpetuity, might have been aware of this truth, had they not purposely overlooked the proper evidences of it: they might have collected it from the testimony of every thing around them, from analogy, from nature itself; and in particular, though they could have learnt it in no other way, they might have inferred it from former dispensations of the same kind which had already taken place."

iii. The most important part of this passage is these three verses, 5—7: λανθάνει γὰρ αὐτοὺς τοῦτο θέλοντας, κ`, τ. λ. But as the English version does not appear to us in this instance to have done full justice to the original, we must begin with endeavouring to propose one which may perhaps do so. "For of this thing they are wilfully ignorant, that heavens there were from of old, and an earth by the word of God of water and through water consisting: by which *heavens* the world which then was being overflowed with water perished: but the heavens *which* now *are* and the earth have been laid

up in store for his word, being reserved for fire against a day of judgment and destruction of ungodly men."

The absence of the article before *οὐρανοὶ* in one of these instances of the allusion to the heavens, and its presence in the other, is a very critical distinction. It ought by all means to be preserved in the version; the inference from it being necessarily *this*, that the *οὐρανοὶ* designated in the former instance as existing *ἔκπαλαι*, and the *οὐρανοὶ* intended in the second, and opposed to the former as *οἱ νῦν*, must be very different things.

Again, the entire import of the Greek phrase, *ἐξ ὕδατος καὶ δι' ὕδατος συνεστῶσα*, can be exprest in English only by a double proposition, "Brought into existence *out of* water, and continuing in existence *through* water." The preposition *ἐκ* denotes the *ὕλη* or material cause, the preposition *διὰ* the mediate or instrumental cause, of the effect. They are opposed to each other here, as in other texts of the New Testament which might be mentioned: *Ἐκ πίστεως καὶ . . . διὰ τῆς πίστεως*[h]—*Ὥσπερ γὰρ ἡ γυνὴ ἐκ τοῦ ἀνδρὸς οὕτω καὶ ὁ ἀνὴρ διὰ τῆς γυναικὸς, τὰ δὲ πάντα ἐκ τοῦ Θεοῦ*[i]: as in another instance we have *ἐξ αὐτοῦ*, of the primary source of all being, *δι' αὐτοῦ* of the mediate and instrumental, *εἰς αὐτὸν*[k] of the final end of all being. The classical reader must know that these two prepositions, so connected and so opposed as they are connected and opposed in this phrase, *ἐξ ὕδατος καὶ δι' ὕδατος*, occur in the best Greek writers.

The meaning of the proposition consequently is, "That as there was an heaven of old, opposed to the heaven which now is; so there was an earth of old, opposed to the earth which now is: an earth, brought into existence at first by the word of God out of water, and continued in existence afterwards by the same word through water." In this case, it is manifest that in the origin of the being of each, and in the mode of the continuance in being of each, there could be no difference between the earth which then was, and that which now is; only in the *order* of being; that one was the

[h] Rom. iii. 30.

[i] 1 Cor. xi. 12.

[k] Rom. xi. 36. The phrase *τὰ πάντα ἐν αὐτῷ συνέστηκεν*, occurs Coloss. i. 17: and is analogous in meaning to that of Hebrews i. 3: *Φέρων τε τὰ πάντα τῷ ῥήματι τῆς δυνάμεως αὐτοῦ* ("his word of power," "his powerful word"): and generally to Acts xvii. 28: *Ἐν αὐτῷ γὰρ ζῶμεν καὶ κινούμεθα καὶ ἐσμέν.*

*first* of a certain kind, the other was the *next* to it. Water it seems was the source of being to this earth which once was; both materially as the ὕλη out of which it was formed, and instrumentally as the means by which it was kept in existence: and the same thing is just as true of the earth which now is. It appears from Scripture[l], that the earth which now is was called into existence *out of water;* and that the act of the third day itself was the separation of *this* earth from *those* waters. It is equally true that it has been kept and maintained in existence ever since, along with all which it contains, principally by means of water. Water is the great principle of vegetable life; and vegetable is the principal, if not the only, support of animal. Water is consequently the *pabulum* of life of all kinds, directly or indirectly, ultimately or primarily; and it is not without reason that the ancients assigned it the preeminence among the elements of things in general*.

* In the Pythagorean and in the Ionic school of philosophy, the first place in necessity, utility, and importance was assigned to the element of water. Ἄριστον μὲν ὕδωρ[m] was a common dogma both of Pythagoras and of Thales. Ἀρχὴ τῶν ὅλων κατὰ Θαλῆν τὸ ὕδωρ[n]—Καὶ Φερεκύδης δὲ ὁ Σύρος καὶ Θαλῆς ὁ Μιλήσιος ἀρχὴν τῶν ὅλων τὸ ὕδωρ φασὶν εἶναι, τὸ ῥητὸν τὸ τοῦ Ἡσίοδου ἀναλαβόντες[o]—Ἐξ αὐτοῦ δ' οἶμαι καὶ τὸν Μιλήσιον Θάλητα τὴν δόξαν ταύτην σφετερίσασθαι, καὶ Πίνδαρον, ἄριστον τὸ ὕδωρ λέγοντα[p]—Θαλῆς δὲ ὁ Μιλήσιος καὶ Φερεκύδης ὁ Σύρος ἀρχὴν τῶν ὅλων τὸ ὕδωρ ὑφιστῶσιν· ὃ δὴ καὶ Χάος καλεῖ ὁ Φερεκύδης, ὡς εἰκὸς τοῦτο ἐκλεξάμενος παρὰ τοῦ Ἡσιόδου οὕτω λέγοντος·

Ἤτοι μὲν πρώτιστα Χάος γένετ'.

παρὰ γὰρ τὸ χεῖσθαι ὑπολαμβάνει τὸ ὕδωρ Χάος ὠνομάσθαι[q]. This definition of Χάος might have been proposed by Pherecydes: but that he derived the idea from Hesiod is a surmise of Achilles' own; and most probably without foundation: Pherecydes having been as we believe older than Hesiod.

Athenagoras observes of the Theogonia of Homer and of Orpheus, ἦν γὰρ ὕδωρ ἀρχὴ κατ' αὐτὸν τοῖς ὅλοις, ἀπὸ δὲ τοῦ ὕδατος ἰλὺς κατέστη[r]. At least in the mythology both of Homer and of Hesiod, Oceanus and Tethys, the two personifications of the aqueous principle, are the supposed origin

[l] Gen. i. 2, 9, 10.
[m] Pindar, Olymp. i. 1.
[n] Scholia ad Pind. Ol. i. 1. cf. ad Olymp. iii. 75. also.
[o] Scholia ad Hesiod. Theogonia, 116.
[p] Ἀλληγορίαι ad Hesiod. Theog. 116. p. 456.
[q] Achilles Tatius, Isagoge ad Aratum, §. 3. Uranologium, 125 E. Cf. Plutarch, De Placitis Philosophorum, lib. I. γ'. Stobæus, Eclogæ Physicæ, lib. I. cap. xi. 12. Diogenes Laertius, lib. I. cap. i. §. vi. 27. Thales.
[r] Legatio, cap. xv. Oxoniæ, 1706.

Again; in the words δι' ὧν ὁ τότε κόσμος ὕδατι κατακλυσθεὶς ἀπώλετο, the reference is to the οὐρανοὶ mentioned just before, the οὐρανοὶ ἔκπαλαι opposed to οὐρανοὶ οἱ νῦν. It is hereby

of all being first to the rest of the gods, and next through them to men, and to other living creatures.

> Ὠκεανόν τε θεῶν γένεσιν καὶ μητέρα Τηθύν [s].
> Ὠκεανός τ' ὅς μὲν γένεσις πάντεσσι τέτυκται [t].

on which Porphyry: Τὸ γὰρ ὕδωρ πάντων ἡ ζωὴ, καὶ προέχει τῶν τεσσάρων στοιχείων, .... ὅθεν καὶ Πίνδαρος ἄριστον αὐτό φησι. And another Scholiast: Ἐκ γὰρ ὕδατος πάντα τὰ στοιχεῖα. ὅθεν καὶ τὸ σπέρμα πνεῦμά ἐστιν ὑγρῷ κραθέν. The philosophers of old indeed were so habitually imprest with the conviction of this truth, that ἐξ ὕδατος καὶ δι' ὕδατος τὰ πάντα was almost a proverbial saying among them. Hesiod represents Pandora, the first woman, (the Eve of Hellenic mythology,) as formed of *earth* and *water*.

> Ἥφαιστον δ' ἐκέλευε περικλυτὸν ὅττι τάχιστα
> γαῖαν ὕδει φύρειν [u], κ', τ. λ.

On the same principle, the Aphrodite of the Greeks, the abstract conception of fecundity personified, was fabled to have been born of the mixture of the seed of Uranus with the water of the sea, and to have derived her name from ἀφρὸς, *spuma*, itself; a definition or explanation of the origin of this name, which we believe to be mistaken, and some time or other may have occasion to shew to have been so. And as all things, from whatsoever elements they may have been formed, are resolved by decay, dissolution, or death, into their first principles again, the Scholiast on the Iliad explains the allusion which there occurs,

> Ἀλλ' ὑμεῖς μὲν πάντες ὕδωρ καὶ γαῖα γένοισθε [x]—

as only another way of saying, "May you die, and return to your original elements:" Βέλτιον δὲ ἀκούειν ἐξ ὧν ἐγένεσθε εἰς ταῦτα πάλιν ἀναστοιχειωθείητε. καὶ Ξενοφάνης·

> Πάντες γὰρ γαίης τε καὶ ὕδατος ἐκγενόμεσθα·

ἐκ γῆς γὰρ πάντα καὶ εἰς γῆν τελευτᾷ [y].

There cannot be any doubt that in all the cosmogonies of antiquity the elementary state of things was *chaos* and *night*, and water was the principal material cause and source of all subsequent being and production; visible being and production at least, vegetable and animal life in particular. This persuasion explains the reverence paid by the Persians of old, the magi, or disciples of Zoroaster, to the element of water as well as of fire. Ἀλλὰ σέβονται ποταμοὺς μάλιστα [z]——Τιμῶσι δὲ καὶ ἥλιον

s Iliad, Ξ, 201. cf. Scholia in locum: also Scholia ad Pind. Olymp. i. 1.

t Iliad, Ξ, 246.

u Opera et Dies, 60.

x H, 99.

y Cf. Stobæus, Eclogæ Physicæ, lib. i. cap. xi. 12. p. 294. Ξενοφάνης ἀρχὴν τῶν πάντων εἶναι τὴν γῆν (λέγει). γράφει γὰρ ἐν τῷ περὶ φύσεως·

> Ἐκ γαίης (τε) τὰ πάντα καὶ εἰς γῆν πάντα τελευτᾷ.

z Herodotus, i. 138.

implied that the instrument of destruction to the earth which existed of old was these heavens. And here it is necessary to take into account the Hebrew idiom, in the use of the word heavens*.

ὃν καλοῦσι Μίθρην . . . . διαφερόντως δὲ τῷ πυρὶ καὶ τῷ ὕδατι θύουσι [a]—Γεραίρουσι δὲ ἐς τὰ μάλιστα τὸ ὕδωρ [b].

Procopio dictante magis juratur ab illis
Ignis et unda deus [bb].

Εὐφράτην μὴ καῖε Φιλώνυμε μηδὲ μιήνῃς
πῦρ ἐπ' ἐμοί· Πέρσης εἰμὶ γὰρ ἐκ πατέρων,
Πέρσης αὐθιγενής, ναὶ δέσποτα, πῦρ δὲ μιῆναι
ἡμῖν τοῦ χαλεποῦ πικρότερον θανάτου.
ἀλλὰ περιστείλας με δίδου χθονί· μηδ' ἐπὶ νεκρῷ
λουτρὰ χέῃς· σέβομαι δέσποτα καὶ ποταμούς [c].

It was this feeling of veneration for the element of water, and the fear of polluting it by any kind of defilement, which induced Tiridates, brother of Vologeses king of Parthia, to travel from Armenia to Rome, A. D. 65 and 66, and back again, all the way by land, instead of by sea [d]. The kings of Persia of the first empire, those of the Parthians after them, and those of the second empire, were archimagi *ex officio*.

In this traditionary reverence for the aqueous principle the Egyptians agreed with the Persians. They had special reasons of their own too, derived from their relation to the Nile, to make them venerate it still more. Καὶ Αἰγύπτιοι ὕδατι (θύοντες [e])—Ὕδωρ καὶ πῦρ σέβοντες μάλιστα τῶν στοιχείων . . . . καὶ ταῦτα δεικνύντες ἐν τοῖς ἱεροῖς, ὥς που ἔτι καὶ νῦν ἐν τῇ ἀνοίξει τοῦ ἁγίου Σαράπιδος ἡ θεραπεία διὰ πυρὸς καὶ ὕδατος γίνεται [f]—Ægypti incolæ aquarum beneficia percipientes aquam colunt, aquis supplicant, aquas superstitiosa votorum continuatione venerantur [g]. On this principle Philo Judæus [h] explains the first of the plagues at the Exodus; which directly affected the element of water, through the Nile and through the rest of the waters of Egypt: Καὶ πρώτας ἐπιφέρειν ἄρχεται (κολάσεις) τὰς ἐξ ὕδατος. ἐπειδὴ γὰρ τὸ ὕδωρ Αἰγύπτιοι διαφερόντως ἐκτετιμήκασιν, ἀρχὴν τῆς τῶν ὅλων γενέσεως τοῦτο εἶναι νομίζοντες, αὐτὸ πρῶτον ἠξίωσε κολάσαι. Both he [i], and Josephus [k], and virtually Scripture [l], give us to understand that the Egyptian name of the element of water was Μὼς, or Μῶϋ, whence the name of Moses; in Greek most properly Μωϋσῆς.

* The word heaven in Hebrew is derived from a verb which means *to be high* or *elevated*. The singular of this noun is said to be found in the

[a] Strabo, xv. cap. iii.
[b] Agathias, ii. 24. 118. 14.
[bb] Sidonius Apollinaris, ii. 83.
[c] Anthologia, i. 254. Dioscorides, xxxvi. Cf. Procopius, De Bello Persico, i. cap. 12. 56. l. 2–57. l. 11.
[d] Cf. Pliny, H. N. xxx. 6.
[e] Lucian, ii. 690. 42. 6–11.
[f] Porphyry De Abstinentia, iv. 9. 324.
[g] Julius Firmicus Maternus, De Errore Profanarum Religionum, cap. ii. p. 3. (Munter. 1826.)
[h] ii. 96. 13. De Mose.
[i] ii. 83. 21. De Mose.
[k] Ant. Jud. ii. ix. 6.
[l] Exod. ii. 10.

In the first place, it is always used in the plural number, even though one heaven only may be meant. There is no singular form of this noun in the Hebrew. In the next place, its first and proper sense, even so used in the plural, is to denote the open space between the earth and the sky, in which all winged creatures fly, and in which the clouds float; the boundary or termination of which, to all sensible appearance, is the starry vault, the sphere of the fixed stars.

Heaven in this sense to our apprehensions must seem to be the same thing with the atmosphere, which every where embraces the earth, and in which every thing wherein is the breath of life, except the inhabitants of the sea and of the ground beneath our feet, lives and moves about. The proper name of this atmosphere in Hebrew is *rekia, expanse:* rendered by the Septuagint *στερέωμα*, by the Vulgate *firmamentum*, by our own Version, after the Vulgate, *firmament*. The production of this firmament is represented as the work of the second day[m]: and it is there set forth as heaven in

Arabic; but it has not been met with in the Hebrew; certainly not in the Old Testament. And though Gesenius thinks it may have had a singular originally, and that singular may be attested even at present by its existence in the Arabic, we should be entirely of a different opinion; and should consider this as a word which both in its own nature and in the idiom of Scripture was always plural. And we should be entirely of opinion too that the absence of any singular form of this noun in the idiom of Scripture is one of the other instances of that philosophical exactness of thought and of expression which really distinguishes the Bible.

Jewish tradition recognises *seven* heavens; at least a plurality of heavens: for the number *seven*, in the idiom of the Jews, stands for any thing complete of its kind. St. Paul speaks of a *third heaven*, 2 Cor. xii. 2—Ephesians iv. 10. and probably Hebrews iv. 14: vii. 26: viii. 1: ix. 24. of an higher point than the highest heavens. The Old Testament of an *heaven of heavens*, Ps. lxviii. 33: cxlviii. 4: 1 Kings viii. 27. But though the word is always plural in the original, it is rendered sometimes as singular, sometimes as plural, in the English version; which is to be regretted.

Heaven and earth in the Hebrew idiom stand for the complex of the material universe: see Ps. lxix. 34: cxv. 15: cxxi. 2: cxxiv. 8: cxxxiv. 3: cxxxv. 6: cxlvi. 3: Isaiah xxxvii. 16: xlv. 12, 18: xlviii. 13: li. 6: lxv. 17: lxvi. 1, 22: (Acts vii. 49.) Jeremiah x. 4: xxxii. 17: li. 15, 48.

In the Book of Daniel, in one instance, iv. 26, " the heavens," are put for God himself.

m Gen. i. 6–8. cf. Ps. cl. 1: Ezek. i. 22, 23: 25, 26: x. 1. Dan. xii. 3.

contradistinction to earth, and as receiving that name at first from the mouth of the Creator himself: and the immediate end of its formation is declared to be to separate the waters above the firmament, that is this open expanse, from the waters below it.

It follows that, as there are waters below this firmament, that is, on earth, visible even to ourselves; so there must be above it, whether visible to ourselves or not[n]. And certainly if the clouds, which ride above this expanse continually, are water in a certain state; and if the vapours, which are exhaled perpetually from the surface of the earth and of the sea, ascend to the region of the clouds; there must be above the firmament at all times the material of water in these vapours and these clouds: which may at any time be precipitated and fall in rain. It is manifest therefore, that in this allusion to the heavens, 2 Pet. iii. 5, nothing can be intended but this rekia, expanse, or firmament, the appointed means of separating the waters above from the waters below.

Accordingly, the same passage proceeds to inform us that through the instrumentality of these heavens, as the secondary cause of such an effect, the world which then was, being overflowed with water, perished. Our first impression no doubt would be to refer the destruction, so produced and so alluded to, to the flood of Noah; especially if we compared with it Gen. vii. 11. and viii. 2: the former of which speaks of the breaking up of the great deep and of the opening of the windows of heaven, when the flood began, and the latter of the shutting up or stopping of both, when the proper time for the subsidence of the waters again was come. It cannot be denied that this is, at first sight, a natural construction of the passage. It is, at least, that in which commentators generally have acquiesced.

The first objection however to this construction on further consideration will be, that it would destroy the analogy of the case, (supposed in the argument of St. Peter taken from this very destruction,) to that which he yet gives these mockers of the latter times reason to expect. They put their demand, Where is the promise of his coming? in the

n To these waters above the firmament, see the allusions in Ps. xxix. 10: lxv. 9: civ. 3: 13: cxlviii. 4: Isaiah xxiv. 18: Jeremiah x. 13: li. 16.

spirit of irony, or of contempt; not only to shew thereby their disbelief of any such future event as this coming, but also of that which was to accompany it, the consummation or end of the existing state of things itself; pointing to a sensible and unanswerable proof, as they supposed, of the absurdity of this latter expectation at least, in the long existing and still protracted continuance of all things just as they had ever been from the first.

Reasoning with such scoffers as these, and having to answer such an argument as this, St. Peter might well appeal to the actual end of one system of things at least already, as a sure proof that another merely like it was capable of coming to an end some time or other also: and, if God had so willed and appointed, infallibly would do so. But nothing less than this, it is evident, as a case in point, would have answered his purpose; much less an appeal to a matter of fact, which, whether penal or not in the end designed by it at the time, yet in its consequences did not amount to the entire and total destruction of an existing order of things. The flood of Noah was a *judgment* on the old world, as he himself represents it[o]: but it was not the end of that world itself.

This leads us to observe, in the next place, that the heavens and the earth, which are each supposed to have existed before this destruction, are each also supposed to have passed away in consequence of it; and both to have been succeeded by others, which were both distinct from them and still in existence. It is evident at least that *οὐρανοὶ οἱ ἔκπαλαι* are opposed in terms to the *οὐρανοὶ οἱ νῦν*: and that as those had been dissolved by water, so these in their turn were some time or other to be dissolved by fire. Now is any one prepared to maintain that the heavens which were existing before the flood of Noah did not continue in existence after it? or that the earth which was in existence up to the time of the flood did not survive the flood also? that *new* heavens or a *new* earth were created after the flood, as they had been at first? But if not, then on what principle can the allusion in 2 Pet. iii. 5—7 be restricted to the deluge of Noah?

[o] 2 Pet. ii. 5.

Let any one however compare with this representation of things in St. Peter the opening scene of the Mosaic account of the creation; in which the earth is exhibited to our view in existence indeed, but "without form and void;" buried in an abyss of waters, which Scripture styles the deep; shrouded in darkness on all sides; encompassed by an atmosphere of darkness itself. What conclusion can be drawn from this simple but sublime description of the state of the case at that moment, but one; that, if the earth had any substantial existence at all, it was in the shape of a chaos, in which matter and form were to be discovered in their elementary principles only?

But as to the cause which had reduced it to that state; though it is not said in so many words that the scene with which the first chapter of Genesis opens is that of the transition from a world which had just been broken up, to another which was about to be put together and formed out of its ruins; yet no one can deny that, had this truth been asserted in express terms, preliminary to the account of the creation which follows, the actual state of things, just before the commencement of our own creation, could not more completely have illustrated and verified the assertion, with such a statement premised to it, than this opening scene of the first chapter of Genesis is competent to do without it.

Here then the testimony of another inspired writer, 1600 years later than the time of Moses, comes in to ascertain and explain the very first words of inspiration itself; and the truth always implied by the description in Genesis cannot even be mistaken, except on purpose, when viewed through the light of the comment of St. Peter upon it: *δι' ὧν ὁ τότε κόσμος ὕδατι κατακλυσθεὶς ἀπώλετο.* We gather directly from this that, between the close of the last system before the Mosaic and the Mosaic itself, there was a transition-state; during which there was neither heaven nor earth properly so called as yet; that the preexisting system of things had been destroyed; the instrument of that destruction had been the heavens which then were; the mode of the destruction, the dissolution of those heavens in a deluge of waters: and the subject of the destruction, the earth which then was too, with every thing which it contained.

And yet, it is very observable, that the subject of this destruction is actually represented in the words of St. Peter as ὁ τότε κόσμος, not ἡ τότε γῆ: and this distinction is one of great importance. We shall neither fully enter into his meaning, nor duly appreciate the letter of his testimony to the truth of the Mosaic account of the creation, if we do not strictly attend to the proper sense of κόσμος in Greek, in opposition to γῆ.

It is well known that κόσμος is properly the Greek for *ornament*; for any thing calculated to adorn and decorate and beautify a particular subject. In a derivative and secondary sense it denotes *order, decorum, propriety,* as predicable of moral modes of any kind; of words or of actions. Thirdly, and with that particular enlargement of its meaning to which the attention of the reader is to be directed at present, it stands for "world;" because of the *order* and *regularity*, the *harmony, beauty,* and *perfection* discoverable in the world, attested and confirmed by all the laws and all the operations and all the productions of nature, both in themselves, and in their relations to each other and to the entire system of which they make part. In this sense, and among the Greeks, the ancients have left it on record *, that

* Ὠνόμασται δὲ κόσμος παρὰ τὴν τῶν συμπάντων διακόσμησιν [p]—Τὸ δὲ πᾶν κόσμον Πυθαγόρας ἐκάλεσεν ἐκ τῆς διακοσμήσεως, οὐδεὶς δὲ πρὸ αὐτοῦ. τὸ δὲ πᾶν τοῦ ὅλου παρὰ τοῖς Στωϊκοῖς διαφέρει· ὅλον μὲν γὰρ λέγουσι τὸν κόσμον, πᾶν δὲ μετὰ τοῦ κενοῦ. [q]—Κόσμον δὲ τὴν τῶν ὅλων σύστασιν, παρὰ τὴν διακόσμησιν καὶ εὐταξίαν, ἐκάλεσαν οἱ παλαιοί· ὡς καὶ Ὅμηρος·

κοσμῆσαι ἵππους τε καὶ ἀνέρας ἀσπιδιώτας·

καὶ πάλιν·

αὐτὰρ ἐπεὶ κόσμηθεν ἅμ' ἡγεμόνεσσιν ἕκαστοι·

τὴν εὐταξίαν λέγων [r].

The Pythagoreans gave the name of κόσμος also to their τετρακτύς: Ἡ δὲ καλουμένη τετρακτὺς, τὰ ἓξ καὶ τριάκοντα, μέγιστος ἦν ὅρκος, ὡς τεθρύλληται· καὶ κόσμος ὠνόμασται, τεσσάρων μὲν ἀρτίων τῶν πρώτων, τεσσάρων δὲ τῶν περισσῶν, εἰς τὸ αὐτὸ συντεθεμένων ἀποτελούμενος [s].

We have no occasion to illustrate the simple meaning of this word κόσμος from the New Testament; nor even its secondary one of order, decorum, regularity, or the like. There is however one instance of its application in the New Testament, taken from its third sense, that of world, too

[p] Achilles Tatius, Isagoge ad Arati Phæn. §. 5: Uranolog. 129 B: cf. Plutarch, De Placitis Phil. Lib. ii. α': Diogenes Laertius, Lib. viii. cap. 1. § xxv. 48: Pythagoras: Stobæus, Eclogæ Physicæ, lib. i. xxii. 6. p. 450.

[q] Ibid. D.

[r] Ibid. §. 21. 142. C.

[s] Plutarch, De Iside et Osiride, lxxv. Cf. De Placitis, Lib. i. γ'.

this most appropriate term, (the fittest which could have been selected,) understood too in the utmost intensity of its meaning, was first applied to the visible creation by Pythagoras. It is evident that the same idea enters the Latin for world also, which is *mundus*; the proper sense of that too in Latin being much the same as that of *κόσμος* in Greek.

Now the destruction of a *κόσμος* in this sense, and that of an earth or of the earth, would be totally different things. The opening scene of Genesis exhibits the destruction of a world in the former sense, but not of an earth, or of the proper subject of such an existence as that which is meant by a world. "I beheld the earth, and lo *it was* without form and void: and the heavens, and they *had* no light[t]." It gives us a view of a world which had lost every external feature of a *κόσμος*, but had not collapsed into nothing; an earth without form and void[u], stript and made bare of two of the most indispensable characteristics of a *κόσμος*, figure and fulness, (which, as so exprest, are virtually the same thing as form in contradistinction to matter,) yet not annihilated.

We conclude then that the true reference of the allusion in St. Peter is to the opening scene of our own creation; that it carries us back to the end of the last course and succession of things connected with our earth before our own; and to the beginning of our own as next in order to it. He evidently takes it for granted that, even in the persons of these scoffers of the latter times, he is addressing those who were not or ought not to have been ignorant of any thing contained in Scripture; nor of this description at the beginning of Genesis, any more than of any thing else which was

remarkable not to be pointed out, viz. James iii. 6, where it is used of the tongue: *Καὶ ἡ γλῶσσα πῦρ, ὁ κόσμος τῆς ἀδικίας*. We apprehend that the simple idea meant to be conveyed even by this word in this instance, and as so applied to the tongue, was that of *sum* or *substance* of iniquity: *ὁ κόσμος τῆς ἀδικίας* is as it were the *universe* of iniquity; as if every particular and individual form of iniquity any where existing besides, and in any other shape, were summed up in this one member.

The metaphorical use of *ὁ κόσμος* here, in this comprehensive sense, should by all means be compared with its use in its proper sense, with the article also, in John xvii. 5, considered supra (p. 309.) *Πρὸ τοῦ τὸν κόσμον εἶναι*.

t Jeremiah iv. 22. cf. 28. xiii. 16. u Gen. i. 2.

to be found in Scripture. He takes it for granted therefore that they must have known that such had been the order of transition from a former state to the present; had they not wilfully shut their eyes to the perception of this truth. He reasons with them consequently, as he was entitled to do, from such an admission; that the end of the present system of things, when it had served its time and fulfilled its purpose, was as naturally to be expected as that of the system last before it: with this difference only, that, whereas water had been the means of terminating that, fire should be the instrument employed to put an end to this. And thus every thing is rendered consistent; and 2 Pet. iii. 5–7 and Gen. i. 2 mutually explain and illustrate each other.

SECTION V.—iv. *On the πλήρωμα τοῦ χρόνου or τῶν καιρῶν, or fulness of time; and on its true Scriptural sense and reference.*

There are various texts in the New Testament, which lead to the inference that the Christian dispensation, regarded in the light of an independent and integral economy, in the sequence and connection of events of every kind from first to last had a season of its own; a determinate point in duration, before which it could not be anticipated, and beyond which it could not be delayed. Scripture itself has designated this season as the *πλήρωμα τοῦ χρόνου,* or *τῶν καιρῶν;* and divines have adopted the language of Scripture, and call it the *πλήρωμα τοῦ χρόνου,* or fulness of time, also.

### Πλήρωμα τοῦ χρόνου, or τῶν καιρῶν.

i. Rom. xvi. 25, 26, 27.

*Τῷ δὲ δυναμένῳ ὑμᾶς στηρίξαι κατὰ τὸ εὐαγγέλιόν μου καὶ τὸ κήρυγμα Ἰησοῦ Χριστοῦ, κατὰ ἀποκάλυψιν μυστηρίου χρόνοις αἰωνίοις σεσιγημένου, φανερωθέντος δὲ νῦν (διά τε γραφῶν προφητικῶν) κατ' ἐπιταγὴν τοῦ αἰωνίου Θεοῦ εἰς ὑπακοὴν πίστεως εἰς πάντα τὰ ἔθνη γνωρισθέντος*[a]· *μόνῳ σοφῷ Θεῷ διὰ Ἰησοῦ Χριστοῦ, ᾧ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.*

ii. Ephes. iii. 4.

*Ἐν τῷ μυστηρίῳ τοῦ Χριστοῦ, ὃ ἐν ἑτέραις γενεαῖς οὐκ ἐγνωρίσθη τοῖς υἱοῖς τῶν ἀνθρώπων ὡς νῦν ἀπεκαλύφθη.*

[a] Sc. *τοῦ αἰωνίου Θεοῦ.*

iii. Rom. iii. 26.

*Πρὸς ἔνδειξιν τῆς δικαιοσύνης αὐτοῦ ἐν τῷ νῦν καιρῷ*[b].

iv. Heb. ix. 9.

*Ἥτις παραβολὴ εἰς τὸν καιρὸν τὸν ἐνεστηκότα.*

v. Ephes. iii. 9.

*Καὶ φωτίσαι πάντας τίς ἡ κοινωνία τοῦ μυστηρίου τοῦ ἀποκεκρυμμένου ἀπὸ τῶν αἰώνων ἐν τῷ Θεῷ τῷ τὰ πάντα κτίσαντι διὰ Ἰησοῦ Χριστοῦ, ἵνα γνωρισθῇ νῦν ταῖς ἀρχαῖς καὶ ταῖς ἐξουσίαις ἐν τοῖς ἐπουρανίοις διὰ τῆς ἐκκλησίας ἡ πολυποίκιλος σοφία τοῦ Θεοῦ κατὰ πρόθεσιν τῶν αἰώνων ἣν ἐποίησεν*[c] *ἐν Χριστῷ Ἰησοῦ τῷ Κυρίῳ ἡμῶν.*

vi. Coloss. i. 25, 26.

*Ἧς*[d] *ἐγενόμην ἐγὼ διάκονος, κατὰ τὴν οἰκονομίαν τοῦ Θεοῦ τὴν δοθεῖσάν μοι εἰς ὑμᾶς πληρῶσαι τὸν λόγον τοῦ Θεοῦ, τὸ μυστήριον τὸ ἀποκεκρυμμένον ἀπὸ τῶν αἰώνων καὶ ἀπὸ τῶν γενεῶν· νυνὶ δὲ ἐφανερώθη τοῖς ἁγίοις αὐτοῦ, κ', τ. λ.*

vii. 2 Tim. i. 8, 9, 10.

*Μὴ οὖν ἐπαισχυνθῇς τὸ μαρτύριον τοῦ Κυρίου ἡμῶν, μηδὲ ἐμὲ τὸν δέσμιον αὐτοῦ· ἀλλὰ συγκακοπάθησον τῷ εὐαγγελίῳ κατὰ δύναμιν Θεοῦ τοῦ σώσαντος ἡμᾶς καὶ καλέσαντος κλήσει ἁγίᾳ· οὐ κατὰ τὰ ἔργα ἡμῶν, ἀλλὰ κατ' ἰδίαν πρόθεσιν καὶ χάριν τὴν δοθεῖσαν ἡμῖν ἐν Χριστῷ Ἰησοῦ πρὸ χρόνων αἰωνίων, φανερωθεῖσαν δὲ νῦν διὰ τῆς ἐπιφανείας τοῦ σωτῆρος ἡμῶν Ἰησοῦ Χριστοῦ.*

viii. 1 Pet. i. 18, 19, 20.

*Εἰδότες ὅτι οὐ φθαρτοῖς, ἀργυρίῳ ἢ χρυσίῳ, ἐλυτρώθητε ἐκ τῆς ματαίας ὑμῶν ἀναστροφῆς πατροπαραδότου, ἀλλὰ τιμίῳ αἵματι ὡς ἀμνοῦ ἀμώμου καὶ ἀσπίλου Χριστοῦ, προεγνωσμένου μὲν πρὸ καταβολῆς κόσμου, φανερωθέντος δὲ ἐπ' ἐσχάτων τῶν χρόνων δι' ὑμᾶς.*

ix. Hebr. i. 1.

*Πολυμερῶς καὶ πολυτρόπως πάλαι ὁ Θεὸς λαλήσας τοῖς πατράσιν ἐν τοῖς προφήταις ἐπ' ἐσχάτων τῶν ἡμερῶν τούτων ἐλάλησεν ἡμῖν ἐν υἱῷ, κ', τ. λ.*

x. Hebr. ii. 2, 3.

*Εἰ γὰρ ὁ δι' ἀγγέλων*[e] *λαληθεὶς λόγος ἐγένετο βέβαιος, καὶ πᾶσα*

[b] Cf. v. 6.
[c] Sc. *ἐτέλεσεν.*
[d] Sc. *τῆς ἐκκλησίας.*
[e] That is, *διὰ τῶν προφητῶν. Ἄγγελος* is used here in its proper sense of *messenger*: not in its secondary one of *angel*. Melak in Hebrew too means messenger properly, angel only

*παράβασις καὶ παρακοὴ ἔλαβεν ἔνδικον μισθαποδοσίαν· πῶς ἡμεῖς ἐκφευξόμεθα τηλικαύτης ἀμελήσαντες σωτηρίας; ἥτις ἀρχὴν λαβοῦσα λαλεῖσθαι διὰ τοῦ Κυρίου ὑπὸ τῶν ἀκουσάντων εἰς ἡμᾶς ἐβεβαιώθη.*

xi. Titus i. 1, 2, 3.

*Παῦλος δοῦλος Θεοῦ, ἀπόστολος δὲ Ἰησοῦ Χριστοῦ κατὰ πίστιν ἐκλεκτῶν Θεοῦ καὶ ἐπίγνωσιν ἀληθείας τῆς κατ' εὐσεβείαν· ἐπ' ἐλπίδι ζωῆς αἰωνίου ἣν ἐπηγγείλατο ὁ ἀψευδὴς Θεὸς πρὸ χρόνων αἰωνίων, ἐφανέρωσε δὲ καιροῖς ἰδίοις τὸν λόγον αὐτοῦ ἐν κηρύγματι ὃ ἐπιστεύθην ἐγὼ κατ' ἐπιταγὴν τοῦ σωτῆρος ἡμῶν Θεοῦ.*

xii. Galat. iv. 4, 5.

*Ὅτε δὲ ἦλθε τὸ πλήρωμα τοῦ χρόνου, ἐξαπέστειλεν ὁ Θεὸς τὸν υἱὸν αὐτοῦ γενόμενον ἐκ γυναικὸς, γενόμενον ὑπὸ νόμον ἵνα τοὺς ὑπὸ νόμον ἐξαγοράσῃ.*

xiii. Ephes. i. 9, 10.

*Γνωρίσας ἡμῖν τὸ μυστήριον τοῦ θελήματος αὐτοῦ κατὰ τὴν εὐδοκίαν αὐτοῦ ἣν προέθετο ἐν αὐτῷ εἰς οἰκονομίαν τοῦ πληρώματος τῶν καιρῶν ἀνακεφαλαιώσασθαι τὰ πάντα ἐν Χριστῷ, τά τε ἐν τοῖς οὐρανοῖς καὶ τὰ ἐπὶ τῆς γῆς.*

xiv. 1 Tim. ii. 5, 6, 7.

*Εἷς γὰρ Θεὸς εἷς καὶ μεσίτης Θεοῦ καὶ ἀνθρώπων, ἄνθρωπος Χριστὸς Ἰησοῦς, ὁ δοὺς ἑαυτὸν ἀντίλυτρον ὑπὲρ πάντων, τὸ μαρτύριον καιροῖς ἰδίοις, εἰς ὃ ἐτέθην ἐγὼ κῆρυξ καὶ ἀπόστολος.*

xv. Mark i. 1.

*Ἀρχὴ τοῦ εὐαγγελίου Ἰησοῦ Χριστοῦ, υἱοῦ τοῦ Θεοῦ.*

xvi. Mark i. 14, 15.

*Μετὰ δὲ τὸ παραδοθῆναι τὸν Ἰωάννην, ἦλθεν ὁ Ἰησοῦς εἰς τὴν Γαλίλαιαν, κηρύσσων τὸ εὐαγγέλιον τῆς βασιλείας τοῦ Θεοῦ καὶ λέγων· Ὅτι πεπλήρωται ὁ καιρὸς, καὶ ἤγγικεν ἡ βασιλεία τοῦ Θεοῦ· μετανοεῖτε, καὶ πιστεύετε ἐν τῷ εὐαγγελίῳ.*

xvii. Acts ii. 16, 17.

*Ἀλλὰ τοῦτό ἐστι τὸ εἰρημένον διὰ τοῦ προφήτου Ἰωήλ· Καὶ*

secondarily. The prophets were all angels in this sense. Cf. Galatians iii. 19. which is the most remarkable instance of this use of the word in its primary sense, yet has been hitherto very generally mistaken for its secondary one of angels. These angels, the ministers of the old law, were the prophets, each in his turn.

*ἔσται ἐν ταῖς ἐσχάταις ἡμέραις, λέγει ὁ Θεὸς, ἐκχεῶ ἀπὸ τοῦ πνεύματός μου ἐπὶ πᾶσαν σάρκα, κ᾿, τ. λ.*

This *πλήρωμα τοῦ χρόνου* or *τῶν καιρῶν* thus spoken of by Scripture, in connection with the particular time of the actual appearance of Jesus Christ in the flesh and of the actual publication of the gospel, is usually referred by divines and commentators to the circumstances of the world at the same time and season, political, religious, and moral: political, as now formed into one great community, subject to one head the Roman emperor; religious, as overrun with every form of polytheism and idolatry; moral, as never before so corrupt and degenerated, never so debased by sensuality, vice, and licentiousness of every kind; never so completely immersed in the sink of its own filthiness as then, partly from the necessary tendencies of the established systems of religion, which made such excesses an act of duty; partly from the contradictory opinions of the different schools of philosophy, and from their perpetual wranglings and controversies; which had unsettled men's minds on every point of duty whether to God, to their neighbour, or to themselves; had obliterated the last vestiges of the traditionary accounts of a creation, and of the origin of things; had undermined all trust in a providence, all belief in the immortality of the human soul, all dread of an hereafter; and had convinced men of nothing so completely as *this*, that every thing which they had to hope for, and every thing which they had to fear, was confined to the present life: in a word, had extinguished the light of natural religion, and stifled the instincts of conscience itself. Such was the service which philosophy was found to be rendering to the cause of truth, of morality, and of religion, at the epoch of the gospel æra. Such is the service which it has ever rendered: which it is still rendering in our own day, and which it will continue to render to the time of the end. Nor can any one object with truth to this picture that it is exaggerated; or that such was not actually the moral condition of the world just at the time when our Saviour appeared[c], and when the reformation, ultimately brought about by the gospel, was on the point of beginning

[c] See the Exposition of the Parables, i. 208, sqq.

and producing its effect. The proofs of this fact, in the accounts which have been left us of those times, are only too numerous and too particular and too complete. It cannot therefore be objected to this construction of the *πλήρωμα τοῦ χρόνου*, that it has been mistaken as far as it has gone; only that it has not gone to the proper extent. It has not come up to the full meaning of the phrase itself: it has never satisfied all the necessities of the case.

The comparison of the above texts one with another is sufficient to prove that the primary and proper reference of this *πλήρωμα τοῦ χρόνου*, in connection with the Christian dispensation, is simply chronological: as was naturally to be expected even from the reference of that dispensation to time at all. "The fulness of the time" or "of the seasons of time," in the scriptural sense of the phrase, and in its proper application to the gospel æra, is the place and order of the Christian dispensation itself in a certain succession of time both before its appearance and after it. It is synonymous with *ἔσχαται ἡμέραι, ἔσχατοι καιροὶ, ἔσχατοι χρόνοι, καιροὶ ἴδιοι*—all meaning the same thing, as predicable of the Christian dispensation in the complex; viz. the time and season at which it actually began, and was actually carried into effect: some of them over and above determining, defining, and designating this actual time and season as its own or its proper time, others as the last or concluding period of a much greater and longer succession of time before it.

This fulness of time then, as characteristic of the Christian dispensation in particular, was the arrival of that period in a preceding decursus of things, which had been appointed beforehand for its commencement; and that period not only part of a common course and succession, measured by time and going on before and after, but the last or concluding part of it also; which being over the whole must come to an end. We cannot hesitate therefore to infer that the proper sense of this fulness of time, so predicated of the Christian dispensation, is its proper place in the order of the succession of the *αἰῶνες* of Scripture; and that too, as more closely connected with the consummation of them all than with any other period of their duration. If the same fulness of time admits of being predicated of this same dispensation in

any other sense or with any other reference, still it must be in some sense or with some reference subordinate to that. The true fulness of the time of the appearance of Christianity is its place in the decursus of æons; its chronological position in the order of a common succession, which embraced and still embraces the entire scheme of creation, of providence, and of redemption, from first to last.

If the world itself was *then* also in a situation most to require and most to be benefited by such a dispensation; this may very well increase our admiration of the Divine wisdom and foresight, which had so long before adapted the actual nature of the dispensation to the actual circumstances and necessities of the period at which it was destined to appear; but the true relation of the dispensation itself to the fulness of time must be to its own or its proper season; that is, as we have shewn, must be simply and purely chronological, yet with an express reference not to any scheme of human chronology, but solely to the divine; to the chronology not of our own world, but of the *αἰῶνες* of Scripture, which mere human measures of time would in vain attempt to go back to, or to follow downwards perpetually.

### SECTION VI.—v. *On the probable duration of an αἰὼν of Scripture.*

On this question we have no opinion to offer; founded on the testimony of Scripture at least. The only answer which we can venture to return to it is conjectural; derived from the meaning of the word *αἰὼν* itself, or from something which may happen to be known, or may be probably supposed, concerning the length of an *αἰὼν de facto* and in a particular instance; which under the circumstances of the case it is evident can be only that of our own system.

The classical sense of *αἰὼν* being that of a series of *αἶα* or *æva,* and the proper sense of *ævum* itself in Latin being nearly allied to that of *sæculum;* we might venture perhaps to assign a *minimum* to the possible comprehension of such a term, though not a *maximum.* We might undertake to say that, as predicated of a complex of duration measured or measurable by time, it could not be intended of less than a *thousand* years; though it might be of a great deal more.

There is no assignable limit of the possible comprehension of the term itself; no more than of the possible extent of the measurement of duration by means of time. Nor could any one undertake to say that the meaning of the word, as used in Scripture, might not go to any conceivable extent; or that any idea of duration, however great, could be attached to it, which its real intent and application in the idiom of Scripture *de facto* might not surpass: and even incomparably so.

The simplest and most elementary of the measures of time, the monad or integer of time itself, of which all the rest however great ultimately consist, is the day and the night, or, as it may be expressed in one word, the day. It is very observable that in one instance, as we have seen[d], St. Peter spoke of *αἰὼν* itself in the sense of eternity only as *a day*; associated the idea of *αἰὼν*, even as endless duration, with that of a day: as if *αἰὼν* itself even in the sense of eternity were after all but *one day*—a day without an end. It is not surprising therefore to find a thousand years represented in Scripture as one day, and one day as a thousand years; each being referred to the Divine, not to the human, apprehension of such distinctions: "For a thousand years in thy sight *are but* as yesterday when it is past, and *as* a watch in the night[e]"—Ἓν δὲ τοῦτο μὴ λανθανέτω ὑμᾶς ἀγαπητοὶ, ὅτι μία ἡμέρα παρὰ Κυρίῳ ὡς χίλια ἔτη, καὶ χίλια ἔτη ὡς ἡμέρα μία[f]. It would be only consistent with this Divine apprehension of time and with this Divine idiom in speaking of it, were even the decursus and continuance of an *αἰὼν*, in the scriptural sense of a world, to be regarded as properly made up of thousands of years; and, if measured by any determinate period at all, as being so by the period of a thousand years.

Now in the case of the last of these *αἰῶνες*, which is the Mosaic, (the *αἰὼν* or world which bears date from the epoch of the Mosaic creation,) its duration from that epoch downwards to any given time, short of its consummation and termination altogether, has always been capable of being determined, and is so still; and always must be. After the proofs of the fact which have been produced in the preceding parts of the present work, there cannot be any doubt that this last

[d] Supra, p. 283. [e] Ps. xc. 4. [f] 2 Pet. iii. 8.

of the æons of Scripture began to number or reckon its proper existence on April 25 B. C. 4004: and that the interval, from that day to any other which might be mentioned up to the present, is the absolute measure of its duration since it began to reckon its duration at all. There cannot be any doubt for instance, that from the mean vernal equinox B. C. 4004, April 25, to the mean vernal equinox A.D. 1851, March 10, (=22,) the age of this world of our own was neither more nor less than 5854 mean natural years.

We are able in this manner to arrive at something like an idea of the duration of an *αἰὼν* of Scripture; but still only of our own *αἰών*: of that with which we ourselves are connected in our proper order of time, and with which all mankind before us have been connected in their turn also: and this is merely one of the *αἰῶνες* of Scripture, and the last and youngest of all. There may be innumerable *αἰῶνες* besides this, older than this as well as distinct from it; and the duration of our own *αἰὼν* can be no kind of criterion of that of any of them: though we may make ourselves certain that all, even the youngest or latest of them, must be older than ours.

But who shall define the antiquity of any of these æons of older date? or the relative antiquity of one of the number to that of another? Who shall determine the actual order of their succession? whether all came into existence at once, or each at a different time? whether any that once came into existence has ever ceased to exist? whether there is not a particular measure for the duration of each, as well as a common or general one for that of all? whether every star which we see in the sky is not the centre of an *αἰὼν*, with a system of time of its own, yet but a constituent part of a still greater and much more comprehensive system too? These are questions which, without more light than has yet been vouchsafed to us, it is impossible to answer: and it is absurd, if not even presumptuous, to propose. They are of the number of those "secret things which belong to the Lord our God," and are purposely withheld from our knowledge at present, no doubt for this reason among others, that such knowledge, even if possessed, could be of no practical use for

our moral and religious improvement. It might gratify our curiosity, but it would not make us better men*.

* Though we feel as strongly as any of our readers can do the impropriety and even the presumption of speculating on such subjects as these without the authority of Scripture; yet with respect to this one point of the possible existence of a common measure of all the *αἰῶνες* of Scripture, there are some things which suggest themselves so naturally to our reflections, and appear to be so pertinent to the whole train of our reasonings hitherto according to the testimony and under the direction of Scripture itself, that we trust we may venture to subjoin them here, and in the form of a note; though we have not thought it proper to bring them prominently forward in the text.

First then, the distinction of æons in the sense of worlds being admitted on the authority of Scripture; the question naturally occurs, whether each of these must not be possessed of a proper system of time of its own? whether each does not serve as a proper measure of duration through and by its own existence? It does not appear to be in any respect inconsistent with Scripture, with reason, or with analogy, to answer this question in the affirmative: and this being done, it follows that there are and there must be in the complex of space as many measures of duration as there are worlds.

The next question would seem to be, whether all these worlds, with their respective systems of time, by means of which they have served ever since as so many distinct measures of duration, came into existence at once? not whether all alike have been the work of the same Creator, but whether they were all created simultaneously, or each in a certain order and succession? It seems to be most agreeable to the analogy of the Divine proceedings in this respect, as far as we have the means of judging of them, and to be most in accordance with the literal construction of all those texts of Scripture which recognise a succession of æons, that this question should be answered in the negative: i. e. that though every thing which exists *in rerum natura*, distinct from the Creator himself, is his work and his production, yet that every thing of this kind was not produced at once; that there is a certain order and succession, a relation of prior and posterior, among the creatures of God themselves. And this being admitted, the inference from the fact is necessary, that the duration of later creations from the very first moment of their proper existence must have been measurable by that of prior; the proper systems of time of earlier creations must have measured not only their own existence from the first, but that of all others, later than their own. It follows that, if there was such a thing as a first creation, an act of creation followed by its proper effect in the production of an æon or world, the first which ever took place; the proper duration of this first creation must be coextensive with that of every subsequent one; and if this had from the first a proper system of time of its own, that system must have been capable of measuring not only the duration of its own world, but also that of every other

Let us return then to the particular case of our own *αἰὼν*, concerning which it *is* permitted us to know even *now* almost

which came into existence later than its own. The duration of every later creation must have been referrible to that of this first of all. The proper measure of the existence of this first must have been the common measure of that of all the rest.

The next question then would seem to be, whether there was such a thing as a first creation? The testimony of Scripture itself seems to leave no doubt that this question must be answered in the affirmative; that creation itself, in its strictest sense, must have had a beginning; that howsoever far back into antecedent duration the first act of creation may go, there was a point in duration before which it had not yet taken place, a point defined and marked by the production of the first world. Our Saviour himself has distinctly alluded to his own preexistence and communion with the Father, before that first act of creation had yet taken place: and that ought to be decisive on this question.

The next inquiry consequently would appear to be, Where is this creation to be found? and among the worlds, which seem to be dispersed almost without number through the infinite regions of space, which is that which thus lays claim to the title of the first and oldest of all? This question is the most difficult to answer of all which we have yet proposed. It is however the most important; and the answer to it involves the sum and substance of all that remains to be said on these points in general.

First then: The various allusions which we have collected and exhibited from Scripture, in every form under which they occur, *Πρὸ καταβολῆς κόσμου, ἀπὸ καταβολῆς κόσμου, πρὸ τῶν αἰώνων, ἀπὸ τῶν αἰώνων, ἐν ἀρχῇ, ἀπ' ἀρχῆς, ἀπ ἀρχῆς κτίσεως*, and the like; all refer us to the first act of creation, yet in connection with our own earth or our own world as the proper subject of that creation. It has been shewn that we cannot limit such allusions even in connection with such a subject to the Mosaic creation; that the first act of creation in connection with its proper subject, even that which in due time became the subject of the Mosaic creation itself, must go back far beyond the epoch of the Mosaic creation. What can we infer from this connection, except that our own world or our own earth was in reality the proper subject of the first creation too? Mankind, it is evident, can know nothing of any creation or any world at present but their own: and these allusions to the beginning of creation or to a point of duration anterior to all creation, to be intelligible to them, must still be referrible in some manner or other to their own world. And if this world was really the first created, if creation itself began with the production of our own world; then in understanding such allusions in their first and most natural sense, and with their first and most obvious reference, we cannot be said to mistake and misapply them, however far back they may go beyond the epoch of the Mosaic creation.

Again; If the order of place or of importance is any argument of the order of being or of succession among the different works of the same Creator;

as much as we can expect *ever* to know. The distinction of parts, in the decursus of this world of our own, exhibits some

and if the relative importance of any one world in comparison of the rest may be judged of from the nature of the events which have been transacted upon it; then perhaps we may venture to say no world can be prior to our own, or older than our own; because none can have been more important. For let the reader reflect for a moment what it is which has been done *on* our earth, not *by* men themselves or *for* themselves, but *among* men and *for* men by the common Creator both of it and of them. Is there any reason to suppose that any thing like this has been done in any part of the universe of space, and among or for any of the creatures of God, besides? And if not, can we hesitate to conclude that, small and insignificant as our own earth in particular may appear in comparison of the immensity of space, and of the innumerable works of a common Creator distinct from itself, none in reality, for some reason or other, can be more important? And what is so reasonably to be supposed the first creation, the beginning of the creation itself, the firstfruits of creative power and goodness, as that which from the first and ever after appears to have been the most important?

Again; The scheme of human redemption being represented in Scripture as conceived and delineated in the Divine mind and purpose from all eternity, (*πρὸ καταβολῆς κόσμου, πρὸ τῶν αἰώνων,*) so important a condition to the ultimate consummation of this scheme, as the locality on which it was always intended to be transacted, may well be supposed to have determined the order of precedence among the actual creations of the Divine power and wisdom and goodness, when the proper time for the exertion of creative energy was arrived: and that no world could be prior in the order of being to that which was destined in the fulness of time to witness the consummation of this wonderful and mysterious scheme; and to be the appointed scene of every thing connected with it.

Again; There is reason to collect from Scripture that the first use and purpose, to which even our own earth was devoted, was to serve as the habitation of the angels, in some peculiar sense or other; more particularly of the greatest and most perfect of the angelic order, before his transgression and fall; of that one whom his Creator appears to have designated at first as the head of all, and as the recognised link of connection between himself and the highest order of his creatures in general, the angels. Nay more, it may be inferred from Scripture that his transgression and fall itself, howsoever produced, (of which too Scripture has given us no obscure intimation that it was due to his exaltation and dignity itself, so much greater than that of every creature of God besides,) and whensoever it took place, took place upon our earth. We cannot enlarge on such mysterious topics as these at present; but for the general confirmation of what we have asserted we should be content to refer to Ezekiel xxviii only, rightly understood and rightly applied. Now the proper ἀρχὴ, jurisdiction, or abode, in any sense, of the highest order of the Divine creatures,

remarkable phenomena; which do much to establish a connection in point of fact between the decursus of a scriptural

and in particular of the greatest and most exalted of all while still in possession of the original holiness and perfection of his nature, may well be supposed not only the most important but the oldest of the material works of God; the most closely connected with the spiritual creation of the whole material creation; and therefore the oldest of all. For, as we argued before, the material world is probably older than the spiritual, but only in the same sense in which the body may be said to be older than the soul; and for the same reason; because the body is wanted by the soul, as the proper instrument for the exertion of its proper powers and capacities. The material world has served this purpose for the spiritual from the first: but no part of it, it would seem, prior to our own earth. If so, no part of it can be older than our own earth.

Again; It may be collected from Scripture that our earth or our world in particular was not only constituted the proper ἀρχὴ or jurisdiction of the superior order of creatures from the first, while still in the full possession of their original perfection and righteousness, but that even after their transgression and fall it was still continued in the same state of subjection to them. It made part of the plan and economy of the mysterious scheme of human redemption that it should be so. We infer this truth from Romans viii. 19—22. Ἡ κτίσις in this representation can mean nothing but the material creation; nor that creation any thing but our own world. And ματαιότης in the Scriptural use of that idea and of that term denotes nothing but the power and influence, which under whatsoever form or name sets itself up as God, instead of the one only God; usurps the titles and attributes of God; lays claim to the perfections which are the sole and exclusive property of the Divine Nature; and consequently is a ματαιότης—a vain, an unreal, and an unsubstantial thing, not as having no actual or personal existence of its own, but as affecting the *name* without the *nature* of God, and substituting a shadow for the substance; as must necessarily be the case when any thing, itself merely a creature of God, however exalted of its kind, sets itself up as the creator himself,—makes itself God, or equal to God. In the Scriptural use of this term both in the Old Testament and in the New, ματαιότης is the abstract conception of the Polytheism of antiquity; as all summed up in this one idea of the name without the nature and reality of God.

That the material creation in the sense of our earth has been subjected to a power and an influence of this kind which Scripture denominates ματαιότης—is proved by various other passages also; from which however it may be collected, but from none of them more distinctly than from this passage of the Epistle to the Romans, that this subjection has not been the effect of any fatal and inevitable necessity, but purely and solely of the will and appointment of the Creator himself, for an end and a purpose too connected with the scheme of human redemption, and arising out of it; that as the final end of the coming of Jesus Christ into the world, even

αἰὼν and the millennary period, whether the reason or principle of such a connection could be explained or not. The

this world of ours in general, was to destroy the works of the devil, the salutary effects of that coming are not confined to the moral and rational and spiritual part of our own system, but extend to the material also; and that the redemption or deliverance of man from the power of sin and Satan, so effected, will be followed by the reassertion of his proper world also from its present state of subjection and bondage, under the dominion of evil and corruption, into its former state of liberty and purity; the glorious liberty of the children or productions of God.

Again; It is the doctrine of Scripture, as we shall see by and by, that, when this temporary economy of subjection to the bondage of sin and corruption, the present subject of which is our own earth or our own world, shall have fulfilled its purpose, there will be an *ἀνακεφαλαίωσις*, a recapitulation, a beginning of things anew, a restoration of every thing both in the moral and in the physical world, both in the spiritual and in the material creation, to its first principles and to its original relations; and a restoration destined to last for ever, and to continue unchanged itself through all eternity: and that this will be accompanied by a new creation adapted to such a constitution and state of things. Of this new creation we are distinctly told our own earth is destined to be the subject: from which fact we think it must follow that our own earth must have been the subject of the first creation too. For what could be the subject of the last creation, destined to be perpetual itself, yet only an *ἀνακεφαλαίωσις*, a restoration of things to their original and primary, in the sense of their proper and natural, state, but that which was the subject of the first?

If these conclusions are not inconsistent with the doctrine of Scripture, (contrary to which we desire to propose nothing,) then we submit it to the judgment of our readers whether it may not be assumed with great appearance of probability that the oldest of the material creations of God must be our own earth, and the rest of the system of which it forms a part? This being admitted, it follows that the proper duration of our own earth must be a measure of that of every other creation besides. Every subsequent creation besides may have its own duration, and its own proper system of time by which it is measured; and every prior creation may measure by its own duration the existence of any which has come into being later than itself; but there can be none, which has measured the duration of all collectively and of each in succession perpetually by its own, but that which came into being first of all; and which we have seen reason to conclude must have been our own earth.

The duration of our own earth has been measured from the first and still is measured by its own proper measures of time; and these, as we have seen, are three and three only, the year, the month, and the day. But the primary and the ultimate measure among these three is this one, the day and the night. It would not be right to say the proper measure of the duration of our earth was the year; for it is evident that its duration

world was created at the beginning of the first of these periods A. M. 1 B. C. 4004; the call of Abraham out of

was already measured or measurable by the month, before it was yet either measured or measurable by the year. For the same reason neither could we say the proper measure of its duration was the month; for it was already measured *de facto* by the day before it had yet begun to be measured by the month. It follows that the proper measure of its existence from the first and ever after was the day; at least if there is no natural measure of time, of the nature of an unit in itself, and yet connected with our own earth from the first, less than the day and night.

With respect then to this question of the possible existence of a common measure of the duration of all the æons of Scripture in the sense of worlds; the conclusion to which we come is that there probably is one, and has been from the first, but that it has been supplied by the proper measure of the duration of our own earth: it is in fact the noctidiurnal cycle of our own earth, the period of 24 hours. No one needs to be startled at the first and most obvious consequence of this conclusion; viz. that on that principle, the reckoning of time almost coextensively, for ought which we know to the contrary at present, with eternity itself, must have been kept in the cycle of day and night. It was always possible with Omniscience so to keep it; and, for ought which we know to the contrary at present, it may always have been possible even for created intelligences of a scale and order so much greater than the human, like the angels, so to keep it; though it would not be so for ourselves. Meanwhile let the reader consider what additional propriety the knowledge of this fact is calculated to reflect on the idiom of Scripture, which every where recognises the cycle of day and night as the true ultimate measure of duration in the form of time; and what additional emphasis is given by it to such texts as Jeremiah xxxiii. 20, 25: and in particular to that characteristic designation of the Ancient of Days, thrice applied in the book of Daniel to the Eternal himself. In our opinion this mode of speaking of such a Being, rightly considered, was competent of itself to lead to the conclusion, that if there be a proper measure of duration in the form of time, and one as old as duration itself too in the form of time, it must be the cycle of day and night. The antiquity of the Creator can be understood relatively only to his creatures. His antiquity in itself is his eternity: and eternity cannot be referred to any measure of duration but itself. If the antiquity of the Creator in this special relation to his own creatures is thus measured by the cycle of day and night; what inference can be drawn from that fact, but that the cycle of day and night is the proper measure of created existence? the cycle of day and night is as old as the first of the creations of God themselves? Who could think of restricting such a reference as this in Daniel to the epoch of the Mosaic creation; as if the antiquity of the Eternal, measured or measurable by days, was to be dated only from that?

We conclude with one more observation. We ventured to say on a former occasion (Diss. IX. ch. i. sect. i. supra p. 5) that the order and process

Chaldæa into Haran, as we have already declared it to be our opinion[g], took place at the end of the second A. M. 2001 B. C. 2004; the material temple was completed by Solomon at the end of the third A. M. 3001 B. C. 4004; the birth of our Saviour took place at the end of the fourth A. M. 4001 B. C. 4: and *then* too the measures of time of every kind, (as we shall see hereafter,) returned to the same relations as those of A. M. 1 themselves; which they had never done before, nor have ever done again since.

There was an unwritten tradition among the Jews[h], a prophecy attributed to Elijah, and handed down in some manner or other to the latest times; that the duration of the present system of things was purposely to be distributed among three periods of 2000 years each, characterised respectively by the presence or the absence of the same thing: which division and its characteristic distinctions the same tradition expressed by "Two thousand years to the void," that is, with neither Moses as yet, nor the Messiah; "Two thousand years to the law," that is, with Moses, but not yet the Messiah;

of the Mosaic creation might have been purposely intended to reflect as in a glass the image of the first and original creation itself. It would be entirely consistent with such an hypothesis that the same world, and *that* our own world, would thus be the subject of both these creations. This hypothesis too does much to explain the peculiar economy of the first three days of the Mosaic creation, in the absence of the sun and the moon as far as any visible tokens of their existence were concerned, notwithstanding their actual existence at the time. But the principal thing to be observed is that as the hebdomadal cycle, (which has always made a part of the proper system of time of our own world,) is founded professedly on an hexaëmeron of creation—it seems only a legitimate inference from this fact, that the hebdomadal cycle wheresoever it exists implies an hexaëmeron of creation, like the Mosaic also, on which it was ultimately founded. Now there is reason to conclude even from Scripture itself that the hebdomadal cycle—i. e. the division of days by sevens, and yet the same cycle of sevens as our own—is older than the Mosaic creation. There is reason to believe that this is a division of time which is observed even in heaven, and by the angels in heaven. If so, we need no other evidence to connect the cycle of day and night, and *that* the proper noctidiurnal cycle of our own earth, with the beginning of time itself; and to point out and designate this as the constituted measure of duration in the sense of time from the first.

g Supra, p. 192.

h Exposition of the Parables, i. 355.

and "Two thousand years to the Messiah," that is, with Moses no longer, but the Messiah.

It cannot be denied that the course of events has answered to the two first parts of this distribution in a wonderful manner; and therefore it cannot be considered improbable, much less impossible, that time and the same course of things will also fulfil the third. Consequently when the year of the world 6001 arrives, it may be found to usher in the close or consummation of the present state of things in some sense or other; more especially the fulfilment of the end and object of the Christian dispensation, as the same with an economy of probation [c]. But it should still be remembered that even in this case an ulterior dispensation has yet to be transacted, and on the present earth too; in the revival and restoration of the scheme of the beginning, the scheme of paradise; a dispensation destined to last a thousand years, (which is another remarkable coincidence,) before all can come to an end.

Though therefore time alone can shew what the actual truth will turn out to be, and it would be worse than presumptuous in any uninspired person to speak dogmatically concerning the future in such a case as this; yet on the whole there seems to be reason to conclude, even from what Scripture itself has revealed, that the duration of our own world or *αἰὼν* in particular, from first to last, cannot be less than 7000 years *, or one week of millennia; the last thousand of which too, in contradistinction to all before it, may be devoted to such an economy as to give it a right to the character and name of sabbatic; a millennary *σαββατισμὸς*, *κατάπαυσις*, or rest, coexistent with the paradisiacal state, and lasting as long as that.

SECTION VII.—vi. *On the succession of αἰῶνες to come.*

The constitution of nature itself bears witness to this truth, That the present system of things cannot be intended for

* Etymologicum Magnum, 37, *Αἰών . . . αἰὼν λέγεται καὶ οἱ ἑπτὰ αἰῶνες ἀπὸ τῆς τοῦ οὐρανοῦ καὶ (τῆς) γῆς κτίσεως, μέχρι τῆς κοινῆς τῶν ἀνθρώπων ἀναστάσεως.* Cf. the book of Enoch; Exposition of the Parables, vol. v. part ii. 102 sq.

c See our Exposition of the Parables, i; ii. 113; v. 512.

eternity. We are surrounded by the evidences of decay and corruption. The existing state is continued and maintained by a constant succession of changes and transformations. It is a cycle of production followed by dissolution, and of dissolution succeeded by reproduction. It lives and survives continually by its own death. Genera and species are perpetuated; individuals are perishable and transient. It must be evident therefore even to our own reason that what was thus made up of evanescent and unabiding parts, could be no just representation of that which was formed for eternity, and was designed to be perpetual.

Nor is any truth more plainly revealed in Scripture than *this;* That as the present world had a beginning, so it will sometime have an end. *Σὺ κατ' ἀρχὰς Κύριε τὴν γῆν ἐθεμελίωσας, καὶ ἔργα τῶν χειρῶν σοῦ εἰσιν οἱ οὐρανοί. αὐτοὶ ἀπολοῦνται· Σὺ δὲ διαμένεις· καὶ πάντες ὡς ἱμάτιον παλαιωθήσονται· καὶ ὡσεὶ περιβόλαιον ἑλίξεις αὐτοὺς καὶ ἀλλαγήσονται. Σὺ δὲ ὁ αὐτὸς εἶ, καὶ τὰ ἐτὴ σοῦ οὐκ ἐκλείψουσιν*[d]—*Ὁ οὐρανὸς καὶ ἡ γῆ παρελεύσονται· οἱ δὲ λόγοι μου οὐ μὴ παρέλθωσι*[e]. "Lift up your eyes to the heavens, and look upon the earth beneath: for the heavens shall vanish away like smoke, and the earth shall wax old like a garment[f]."—"And all the host of heaven shall be dissolved, and the heavens shall be rolled together as a scroll; and all their host shall fall down, as the leaf falleth off from the vine, and as a falling *fig* from the fig tree[g]."—"So man lieth down, and riseth not till the heavens *be* no more[h]."

It is manifest therefore that, so far as our own earth is concerned, the present *αἰὼν* of which it is the subject is analogous to all through which it may have passed before this: and that, as these must all have come to an end in their turns, so is this destined to do likewise. We have seen however from the comparison of Gen. i. 2 with 2 Pet. iii. 5–7, that in the last of the instances of such a termination, before the commencement of the present *αἰὼν* itself, it pleased the Spirit of God to give us an actual view of the process of the transition from one period of this kind, in the continued

d Hebrews i. 10; Ps. cii. 25–27.
e Matt. xxiv. 35: cf. v. 18. Cf. Mark xiii. 31; Luke xxi. 33.
f Isaiah li. 6: cf. liv. 10; 2 Pet. iii. 10.
g Isaiah xxxiv. 4. Cf. Apocal. vi. 13.
h Job xiv. 12.

existence of the same material subject, to another; from which we have learnt a very important fact; viz. that the process of this transition, in the case of its proper subject, does not amount to annihilation, only to dissolution; that an existing system may be broken up, so as no longer to present the appearance, and no longer to deserve the name, of a *κόσμος*, a *mundus*, a *world*; but it does not necessarily relapse into nothing.

To judge from the analogy of this case then, we might venture to conjecture that when the present system also has served its time, it will be broken up and dissolved, but not annihilated. In fact it must stand to our own reason that, of the two parts of which the entire universe of existence is composed, matter and spirit, the latter, so far as we know to the contrary, is not capable of dissolution, though it may be of annihilation; the former, we know, is liable to dissolution, but not thereby to destruction: that dissolution to matter is *change*, and change is only the condition of and the prelude to a new state of existence; and that neither matter nor spirit can cease to exist absolutely, except by being annihilated. Now there is no intimation to be found in Scripture which would authorize us to suppose that any such consummation, or at any time, awaits either the material or the spiritual part of the universe, each of which alike is the creature of God; for that would virtually amount to this; That as there was a point in duration, when nothing existed as yet in the universe of space except God, so there will again be a point in duration, when nothing will be in existence any longer but God also: a conclusion derogatory to the attributes of the Deity, contradictory to his own assurances, and irreconcilable to the scheme of Christianity; the effects of which, both for good and for evil, as a thousand texts and declarations of Holy Writ serve to prove, are destined to be everlasting to the proper subjects of each.

It has pleased the same Spirit also to make known to us not only the fact of this transition from the end of one *αἰὼν* to the beginning of another, but the mode too; or the nature of the means employed instrumentally to dissolve the texture of a preexisting world, preparatory to the formation of a new one in its stead; viz. water: as appears both from

2 Pet. iii. 5–7 and from Gen. i. 2. Water, we say, was the instrument employed for this purpose, in the last instance of the transition which has yet happened. Water was the means again employed, when thus much of the same kind of dissolution as concerned the actual destruction of life on the surface of the earth, and the temporary obliteration of the external features and characters of a κόσμος—the visible order and symmetry and beauty of nature—was again proposed and effected by the deluge of Noah. But the promise of God himself was solemnly given to Noah after that event, and in him to all mankind who have lived in succession on the face of the earth since the flood; that the sins of the inhabitants of the earth should never again be visited on the earth itself in the same way: and that promise has held good to the present moment, and will do so to the end of time[i].

Accordingly, from this time forward, it has been uniformly the assurance of Scripture that, though the present world too is destined to be destroyed at last, the mode of its destruction will not be by water, but by fire. And the universal tradition and belief of mankind themselves, from the flood downwards, (howsoever derived,) attests and ascertains the generality of the same expectation; That the next and still future, but final, catastrophe of the same kind, which awaits our globe, will be the effect not of water, but of fire*. This

* Principio maria ac terras cœlumque tuere:
Quorum naturam triplicem tria corpora, Memmi,
Treis species tam dissimileis tria talia texta
Una dies dabit exitio, multosque per annos
Sustentata ruet moles et machina mundi.—Lucret. v. 93.

Esse quoque in fatis reminiscitur adfore tempus
Quo mare quo tellus conreptaque regia cœli
Ardeat, et mundi moles operosa laboret.—Ovid. Met. i. 256.

There is a singular statement in Epiphanius, i. 39. B. Nazaræi, iii, which, as it stands, appears to be connected with an Egyptian tradition relating to the last of the plagues at the Exodus: Ἐν γὰρ τῷ καιρῷ ὅτε τὸ Πάσχα ἐγένετο ἐκεῖσε, ἀρχὴ δὲ αὕτη γίνεται τοῦ ἔαρος, ὅτε ἡ πρώτη ἰσημερία, ἐκ μίλτεως λαμβάνουσι πάντες Αἰγύπτιοι κατὰ ἀγνωσίαν, καὶ χρίουσι μὲν τὰ πρόβατα χρίουσι δὲ καὶ τὰ δένδρα, καὶ συκᾶς καὶ τὰ ἄλλα, φημίζοντες καὶ λέγοντες ὅτι (φησὶ) τὸ πῦρ ἐν ταύτῃ τῇ ἡμέρᾳ κατέφλεξέ ποτε τὴν οἰκου-

[i] Isaiah liv. 9.

truth itself indeed is not so distinctly revealed in the Old Testament as in the New; though there are texts even there which imply it[k]. But in the New Testament it is clearly made known; it is directly announced beforehand; so that no one can shut his eyes to it except on purpose: and no where more so than in this Second Epistle of St. Peter, which gives us likewise so plain and direct an insight into the close of the last system before our own, and into the process by which that was effected.

2 Peter iii. 7. 10, 11, 12.—Οἱ δὲ *νῦν οὐρανοὶ καὶ ἡ γῆ αὐτοῦ λόγῳ τεθησαυρισμένοι εἰσὶ, πυρὶ τηρουμένοι εἰς ἡμέραν κρίσεως καὶ ἀπωλείας τῶν ἀσεβῶν ἀνθρώπων. . . . ἥξει δὲ ἡ ἡμέρα τοῦ* Κυρίου *ὡς κλέπτης ἐν νυκτὶ, ἐν ᾗ οἱ οὐρανοὶ ῥοιζηδὸν παρελεύσονται, στοιχεῖα δὲ καυσούμενα λυθήσονται, καὶ γῆ καὶ τὰ ἐν αὐτῇ ἔργα κατακαήσεται. τούτων οὖν πάντων γινομένων, ποταποὺς δεῖ ὑπάρχειν ὑμᾶς ἐν ἁγίαις ἀναστροφαῖς καὶ εὐσεβείαις; προσδοκῶντας καὶ σπεύδοντας τὴν παρουσίαν τῆς τοῦ Θεοῦ ἡμέρας, δι' ἣν* οὐρανοὶ πυρούμενοι λυθήσονται, καὶ στοιχεῖα καυσούμενα τήκεται, κ', τ. λ.*

Many too are the texts of the New Testament which speak of the last judgment and of the *fire*, predestined to survive that judgment, and to burn through all eternity; texts, which we think it proper to refer to at present[l], but not necessary to quote.

With regard then to the last question of all, the succession of *αἰῶνες*, even after the termination of the present system of things; we have collected and exhibited the texts,

*μένην*. If this fact is to be received on the authority of Epiphanius, we should be entirely of opinion that the practice in question was much more probably to be referred to the expectation of a future conflagration, than to the recollection of a past one. *Καταφλέξει ποτὲ* would be entirely consistent with the general tradition to this effect; but not *κατέφλεξέ ποτε*.

* It is very observable that the construction here is *δι' ἣν*, not *δι' ἧς*, *propter quam*, not *per quam*. We may collect from it, that *ἡμέρα* is used in this allusion in the proper forensic sense of the *judicial day*, the day *because* of which, from its very nature, such penal, retributive, or judicial consequences to the existing state of things were necessarily to be expected. Cf. Hebrews x. 25. 27. vi. 8.

k Deuteronomy xxxii. 22.

l 2 Thess. i. 6–8: 1 Cor. iii. 13–15: Hebrews vi. 8: x. 27: Matt. xxv. 41: iii. 12: v. 22: xviii. 8, 9: xiii. 42. 50: xxiii. 33: Mark ix. 43: 44–48: 49: Luke iii. 7: 9: Jude 7: Apoc. xiv. 10, 11: xviii. 8: xix. 20: xx. 10: 14, 15: xxi. 8.

which speak of an *αἰὼν μέλλων*, an *αἰὼν ἐρχόμενος*: and consequently of one still future. That such an *αἰὼν* still future therefore is to be expected is not to be doubted. Among these texts however there are some which require to be more particularly considered in reference to this question.

As i. Ephes. i. 21: *Ὑπεράνω πάσης ἀρχῆς καὶ ἐξουσίας καὶ δυνάμεως καὶ κυριότητος καὶ παντὸς ὀνόματος ὀνομαζομένου, οὐ μόνον ἐν τῷ αἰῶνι τούτῳ, ἀλλὰ καὶ ἐν τῷ μέλλοντι.* It is of angelic styles and titles that this passage speaks. If there are to be such in the world to come, that world cannot be like the old world at present; but it will be like the angelic world even now. With this text therefore we should compare Luke xx. 35: Οἱ *δὲ καταξιωθέντες τοῦ αἰῶνος ἐκείνου τυχεῖν καὶ τῆς ἀναστάσεως τῆς ἐκ νεκρῶν οὔτε γαμοῦσιν οὔτε ἐκγαμίσκονται· οὔτε γὰρ ἀποθανεῖν ἔτι δύνανται· ἰσάγγελοι γάρ εἰσιν.* That is, those who are destined for the life of that *αἰὼν* are like the angels, are equal to angels; are no longer men, properly so called, but angels: agreeably to that declaration too of 1 Cor. xv. 51: Π*άντες μὲν οὐ κοιμηθησόμεθα, πάντες δὲ ἀλλαγησόμεθα*—by the conversion of the human nature, as the context implies, into the angelic. We should compare with it also Hebrews vi. 5: Κ*αλὸν*[m] *γευσαμένους Θεοῦ ῥῆμα, δυνάμεις τε μέλλοντος αἰῶνος*: in which the powers enjoyed even in the present world, understood of the miraculous gifts and privileges so largely and liberally bestowed on the first professors of the Christian religion, and on the first ministers of the gospel, are set forth as only a foretaste of those of the world to come; in which such gifts and graces should be carried to their highest perfection, by being both communicated and enjoyed to their utmost extent.

ii. Ephes. ii. 6, 7: Κ*αὶ συνήγειρε καὶ συνεκάθισεν ἐν τοῖς ἐπουρανίοις ἐν* Χ*ριστῷ* Ἰ*ησοῦ, ἵνα ἐνδείξηται ἐν τοῖς αἰῶσι τοῖς ἐπερχομένοις τὸν ὑπερβάλλοντα πλοῦτον τῆς χάριτος αὐτοῦ ἐν χρηστότητι ἐφ' ἡμᾶς ἐν* Χ*ριστῷ* Ἰ*ησοῦ.* In which words it appears to be clearly implied that not merely one future *αἰὼν*, but many, are still to be expected; in other words, that the decursus of such *αἰῶνες* is destined to be perpetual, and the effects of that which was transacted even in our own *αἰὼν*,

[m] Καλὸν is here a part of the predicate, "Having tasted the word of God that it is good."

in the events of the Christian dispensation, are to be sensibly and experimentally attested by their still continuing consequences throughout a never-ending series of these ages of eternity. But in this case the word *αἰῶνες* can have no meaning here save that of periods of time; of *worlds*, in the original sense of our own Anglo-Saxon term: not that of fresh creations, or new worlds in the secondary meaning of the word. And with these texts too we should compare Ephes. iii. 20, 21: Τῷ δὲ δυναμένῳ ὑπὲρ πάντα ποιῆσαι ......αὐτῷ ἡ δόξα ἐν τῇ ἐκκλησίᾳ ἐν Χριστῷ Ἰησοῦ εἰς πάσας τὰς γενεὰς τοῦ αἰῶνος τῶν αἰώνων. Ἀμήν. The language of this passage is similar to that of Coloss. i. 26: Τὸ μυστήριον τὸ ἀποκεκρυμμένον ἀπὸ τῶν αἰώνων καὶ ἀπὸ τῶν γενεῶν. The only difference between them is that the latter speaks of *αἰῶνες* in conjunction with *γενεαὶ a parte post*, the former *a parte ante*.

If *γενεὰ*, in each of these instances, is used in the sense of a generation or family, (*soboles*, *proles*,) then the phraseology of both so far will resemble that of Ephes. iii. 14, 15: Τοῦ Κυρίου ἡμῶν Ἰησοῦ Χριστοῦ, ἐξ οὗ πᾶσα πατριὰ ἐν οὐρανοῖς καὶ ἐπὶ γῆς ὀνομάζεται: for *πατριὰ* here must have the meaning of generation or family also. And the inhabitants of heaven even now, whatsoever be the order, divisions, or distinctions among them in other respects, being regarded as one great family, and as all standing to God in the relation of sons, (which is the invariable idiom of Scripture in speaking of the angels, as Beni Aleim or sons of God,) and the inhabitants of the earth, among whom there are innumerable distinctions, being considered to constitute another; it is implied in this text that to every family of this kind, both in heaven and on earth, to every *γενεὰ* and to every *πατριὰ*, Jesus Christ stands in the same relation of parentage, as the common Author of their existence; as their common Creator, and consequently as their common Father. And, if *γενεαὶ* in Ephes. iii. 21. has this signification, then it must be inferred from this text that such distinctions and such relations will hold good through the decursus of a never-ending eternity. And this would be very true in itself, and worthy of all acceptation. It may be questioned however whether this is the meaning of *γενεαὶ* here, or in Coloss. i. 26; and not simply that of a certain measure of time. Gene-

rations are one among the other measures of duration: and the word *γενεὰ,* in a particular instance, may have a chronological sense, as much as a literal one, as it seems to have in Isaiah xli. 4: "calling the generations from the beginning;" successive races of men, each in their order, and each having their appointed period of being, being most probably the idea presented to the mind of the prophet here. If St. Peter could speak of a day as a proper measure of eternity, so might St. Paul of a generation.

iii. Ephes. i. 9, 10: *Γνωρίσας ἡμῖν τὸ μυστήριον τοῦ θελήματος αὐτοῦ, κατὰ τὴν εὐδοκίαν αὐτοῦ, ἣν προέθετο ἐν αὐτῷ, (εἰς οἰκονομίαν τοῦ πληρώματος τῶν καιρῶν,) ἀνακεφαλαιώσασθαι τὰ πάντα ἐν Χριστῷ, τά τε ἐν τοῖς οὐρανοῖς καὶ τὰ ἐπὶ τῆς γῆς ἐν αὐτῷ.* One of the senses of *ἀνακεφαλαιώσασθαι,* though not the first and most direct, is to *sum up anew;* as any one might do the items of a long account. Another and a more proper one is to endue with a *fresh head;* to re-collect or reduce under a new head; and consequently to make a fresh beginning of things: especially to collect together, to unite and reduce to one the several parts of the same subject, before dispersed or separated from it and from each other; for instance, the members of one and the same body; if such were supposed to exist disjoined from their proper body, and from each other too. To such particular members of such a common body, the proper bond of union, the proper principle of identity, would be a common head.

It may be inferred then from the language of this text, which is quite as much literally as figuratively to be understood, that the distinction existing at present between things invisible and things visible, between heaven and earth, between angels and men, both of whom stand in the same relation of members of one body of which Jesus Christ himself is the head, will no longer exist in the future state which is to be expected: but all will be brought together, all will be united, and all will be made one, in him and under him; as many members in particular but of one body in general and under one head in common. And it is further declared in this passage, that the final end and purpose of the Christian dispensation itself was this very *ἀνακεφαλαίωσις*—this summing up, this recapitulation, of every thing whether in

heaven or in earth, capable of standing in the relation of a member to this body in particular, under this head in common. If so, we cannot doubt that this resulting state of things must be everlasting. There can be no change in it, while God and Jesus Christ continue unchanged too: "the same to-day, yesterday and for ever[n]." And yet it will be and must be strictly an *ἀνακεφαλαίωσις*—a new state of things, a state which has not yet taken place; a consummation which has not yet been realized.

iv. Lastly, St. Peter declares that new heavens and a new earth are also to be expected: *Καινοὺς δὲ οὐρανοὺς καὶ γῆν καινὴν κατὰ τὸ ἐπάγγελμα αὐτοῦ προσδοκῶμεν, ἐν οἷς δικαιοσύνη κατοικεῖ*[o]: in which allusion to the *promise* of God, the reference is probably to Isaiah lxv. 17: "For behold! I create new heavens and a new earth; and the former shall not be remembered, nor come into mind."—and lxvi. 22: "For as the new heavens and the new earth, which I will make, shall remain before me, saith the LORD, so shall your seed and your name remain[p]."

A new heaven however and a new earth, retaining the name of the old at least, seem to imply a continuance of the present constitution of things also; with this difference only, that it must be free from all the imperfection, both moral and physical, mixed up with it at present. The last fire is destined to refine and purify, but not to consume, either the heavens or the earth: and heaven will still be heaven and earth will still be earth, in some sense or other, analogous to what it was before, *mutatis mutandis* only, if it retains the same name as before.

And with this too, finally, we may compare Hebrews ii. 5: *Οὐ γὰρ ἀγγέλοις ὑπέταξε τὴν οἰκουμένην τὴν μέλλουσαν περὶ ἧς λαλοῦμεν*: which appears to adopt even the conventional language of the present state of things, and to transfer it to that of the future world: for *οἰκουμένη* in the classical use of the term, as all the learned are aware, denoted only a part of the earth, though the principal and most important part; viz. that which was inhabited, or considered to be fit to be inhabited. It is only by *synecdoche* that it stands for the whole world. We think it more probable however

n Heb. xiii. 8. o 2 Pet. iii. 13. p Cf. Is. lxiv. 4: 1 Cor. ii. 9.

that the *οἰκουμένη* here alluded to is to be restricted to the proper extent and jurisdiction of the kingdom of the Messiah, in the millennary state of things. For we are given to understand that the head of that kingdom and on earth, while the millennary dispensation lasts, will be our Lord Jesus Christ in person; in contradistinction to any other archon or superior, even the highest of the angels, (if there are degrees of height among the angels, which we doubt: though that there are *ἀρχαὶ* and jurisdictions of the angels, and always have been, we do not doubt.) The new earth however of St. Peter cannot be this *οἰκουμένη ἡ μέλλουσα* of the writer to the Hebrews, because, though it may resemble the old in every thing but its blemishes and its imperfections, yet like the Phœnix of ancient fable it must be born of the fire which consumes its predecessor: it must spring up to a new and more glorious existence out of the ashes of its old.

# DISSERTATION XII.

*Origines Kalendariæ. On the Egyptian calendar.*

## CHAPTER I.

### Section I.—*Statement of the object proposed in this dissertation.*

We have produced[a] a number of testimonies, according to which the ancient Egyptians were either so ignorant of the true length of the natural year, or so regardless of propriety in the use of terms when speaking of it, as to reckon a day, or a month, or an interval of three or four months, *a year*; and to call it by the name of *a year*: and we have confronted this class of testimonies with another, according to which the ancient Egyptians had kept a regular account of celestial phenomena, especially of solar and lunar eclipses, for time out of mind; and therefore must have possessed and must have made use of a regular calendar of some kind or other for time out of mind also.

In contradiction to the first of these statements we shall proceed to shew that the civil year of the Egyptians was always the same with the equable year of 365 days; and in opposition to the second we shall endeavour to prove in like manner that even this equable year of the Egyptians was not of indefinite antiquity; that it agreed with the primitive civil year; and that it may and must go as far back as that; but that it cannot go any further. It shall be our object at present to establish the truth of each of these propositions first by such *general*, and secondly by such *particular*, arguments as may best be adduced for the purpose. The complete verification of both is not contemplated in the present dissertation, which is only preliminary to others about to follow: but we trust that with the blessing of God

[a] Diss. ix. ch. vii.

on our endeavours we shall succeed in establishing each, beyond all possibility of doubt, before we have done with this subject of the Egyptian calendar in general.

## Section II.—*General arguments of the nature of the Egyptian calendar from the first.*

### i. *Testimony of Scripture.*

The question which we are proposing to consider, viz. What was the nature of the civil calendar among the Egyptians from the first, or from as far back as it is possible to trace it at present, being regarded as one of fact, which must be decided in the same way as all questions of fact in general; the oldest and most authentic testimony to which we could appeal for the determination of such a question of fact is that of Holy Scripture.

It appears from the Book of Genesis that the civil year, actually in use at the date of the flood, was the equable year; the same in all respects with the equable year of our Fasti, brought down from the first until then. It appears from various parts of the subsequent history of the patriarchs that this civil year was still the same with itself, and with the equable year of our Fasti, down to the descent into Egypt. It appears from the Book of Exodus that it was still continuing identical with itself and with the year of our Fasti, down to the beginning of the last year of this kind before the date of the Exodus, when the first day in both was falling on September 10 at midnight; just as in the year of the deluge, 788 years of its own æra before, it had fallen in each on March 20 at midnight.

There is no reason to suppose that the actual form of the civil year, recognised and attested by this book, up to the date of the Exodus was not as much that of the Egyptians in general as that of the children of Israel in particular. It is to be considered that at the time of the Exodus the Israelites had been 218 years domiciliated in Egypt; that their manners and customs, their habits and modes of life were not then distinguishable from those of the Egyptians; that the reckoning of time, if nothing else, could not fail to be common to both. Moses in particular was not only born in

Egypt but bred up among the Egyptians. There was no difference between Moses and a native Egyptian, down to the day of his flight to Midian. The calendar of Moses in particular could not possibly have differed from that of the Egyptians in general. We insist on these considerations at present merely to shew that, according to every presumption of the state of the case *a priori* which could be most reasonably formed; there could be no difference between the calendar of the Jews and that of the Egyptians, before the Exodus. The truth is that each was necessarily the same with the other at this time, because each was the same with the postdiluvian continued down to that time. The postdiluvian was the same with the antediluvian: and the antediluvian was the primitive calendar; coeval with the origin of mankind and common from the first to all the posterity of Adam.

### SECTION III.—ii. *Egyptian tradition of the origin of the Epagomenæ of their civil year.*

The recognition and use of five epagomenæ, (and of neither more nor fewer than five,) at the end of the civil year, is an infallible argument of the equable year; of the year which consisted of 360 days, and of five days over, perpetually. If therefore the Egyptians themselves recognise the existence and attest the use of these five epagomenæ, (and only of these five,) at the end of their year, from time immemorial; they recognise the existence and they attest the use of the equable year among themselves from time immemorial also.

Now this is actually the case. The Egyptians had a particular tradition to account for the epagomenæ, or supernumerary days of their calendar; which we shall not produce at present, in order to examine and inquire into it more particularly, because we shall have occasion to do so hereafter, in connection with another part of our subject. The tradition itself is mere fable, and utterly unworthy of credit in an historical point of view. It is admitted however to be one of the most ancient fables of this kind among the Egyptians themselves; and it is just as competent to answer the purpose of the argument which we have in view in referring to it at present, as if it contained nothing but truth: for it limits the epagomenæ of the calendar from the first to this

particular number of five; and it assigns them an origin which goes back to a point of indefinite antiquity: on which principle the equable calendar too, to which these five epagomenæ were first attached, must go as far back also.

Every one will understand this as soon as he is informed that, according to this fable, the five epagomenæ of the calendar first came into actual existence along with the five principal Egyptian divinities, Osiris, Arueris (or Horus the elder), Typhon, Isis, and Nephthys[b]: each of whom was supposed to have been born on some one of these five days. Consequently even if these epagomenæ were not older than these five gods, they were at least no younger. And what had the Egyptians themselves to shew older than their Osiris and their Isis in particular? from whom, to the foundation of Alexandria by Alexander the Great, some of them reckoned an interval of 10,000, others one of 23,000, years[c]. What is there even in the fabulous history and fabulous chronology of the monuments anterior to Osiris and Isis?

### SECTION IV.—iii. *Forms of the civil year in Egypt of confessed antiquity, different from the equable, yet derived from it; and consequently younger than it.*

The antiquity of this particular form of the civil year in Egypt is demonstratively proved by the existence of any other form of the year also in that country, which can be traced up to it; and consequently must presuppose it. And in this case, the later the derivative form of the year may be found to be, and the more recent the date of its first introduction into use; the longer the preexisting civil year from which it was derived must have been in existence, and exclusively so too: and, on the other hand, the further back the use of this secondary form of the calendar may actually be traced, yet, if it was notwithstanding derived from an older calendar of a different kind, the further back must the use of this older calendar itself extend; the more remote must be the origin of this in particular: so that the antiquity of the equable year in Egypt, as the parent and source of every other kind of reckoning of annual time in that country,

[b] Plutarch, De Iside et Osiride, xii. Diodor. Sic. i. 13.
[c] Diodor. Sic. i. 23. 26.

is established by the simple fact of the existence of such derivative calendars among the Egyptians, whether their own dates are comparatively ancient or modern.

For example; the Alexandrine correction was an actual form of the civil calendar in Egypt; and yet, comparatively speaking, it was of modern date. No date can make it older than B. C. 30; and its true date makes it no older than B. C. 26. And what is either of these dates in the decursus of Egyptian antiquity? not merely of that antiquity to which they themselves pretend, but of that which really belongs to them? How long before either of such terms as these was Egypt already the first of the nations! already in possession of that preeminence, as the centre of civilisation, and as the principal school of philosophy, of art, and of science, which the consent of antiquity appears to have assigned it! Can any one doubt whether the Egyptians had a proper calendar of their own or not, before the Alexandrine correction? and if so, how much older than this correction must that have been! And can any one doubt that this more ancient calendar must have been the equable calendar of primitive antiquity, and the equable calendar of our own Fasti too; who knows that the first day of this Alexandrine correction, whether B. C. 30, or B. C. 26, was the first day of this equable calendar, brought down from the first till then?

Again, the Apis calendar was a particular form of the lunæ-solar reckoning of annual time. All chronologers are agreed that this had an actual existence in Egypt; and all are agreed too that its existence and use in Egypt were of undoubted antiquity. Now the more ancient this form of the lunar calendar any where; the more ancient must the equable solar calendar also be: for, as we have often had occasion to explain these two things, the equable reckoning of annual solar time and the Apis reckoning of annual lunar have been inseparably associated by nature itself. The former might be used in a particular instance independently of the latter; but the latter could never have an actual existence independent of the former. If the Apis cycle then was ancient in Egypt, so must the equable year have been. If the former went back for time immemorial, so must the latter have done. Now the very name of this

cycle implies that it must have been as old as the Apis at least. And what had the Egyptians to shew, next to their gods Osiris and Isis, older than their Apis? Was not the Apis as old as the second of their dynasties, according to the monuments themselves?

Again, the Sothiacal or Canicular period is acknowledged to have had an actual existence in Egypt. And this period too, from its very nature and constitution, presupposes the existence of the equable or cyclical year. There could be no such thing as a Sothiacal period, without a calendar reckoning by the equable cyclical year; for the period itself is neither more nor less than the interval, in equable years, between the coincidence of a given equable date with a given Julian date under certain circumstances, in one instance, and the same coincidence between the same two things, under the same circumstances, in another. This period has consequently its limits both in equable time and in Julian: and in the latter it cannot be less than 1460 mean Julian years.

Now it is commonly taken for granted by chronologers that one period of this description came to an end in A. D. 139. It must have begun therefore in B. C. 1322. It is agreed too that it came to an end on the last epagomene A. D. 139. Consequently it must have begun on the first of Thoth B. C. 1322. It follows that the equable cyclical reckoning in Egypt must be as old as B. C. 1322 at least: beyond which it would be difficult to shew what the Egyptians themselves have to appeal to, and to produce, as evidence of their own antiquity, which is entitled to belief on good grounds.

By these means we trace back the continued existence and use of the same form of the civil year in Egypt, the equable year of our Fasti, the equable year of primitive antiquity, beyond the date of the Apis cycle, B. C. 973, beyond the date of the Sothiacal period, B.C. 1322; (in reality, as we shall see hereafter, B. C. 1350;) much further than the beginning of authentic and trustworthy history in that country in any shape, distinct from the testimony of the Bible. Some chronologers maintain the fact of a succession of Sothiacal periods among the Egyptians, of which that of which

we have been speaking was only the second or the third. Such chronologers, to be consistent, must maintain the existence and use of the equable year among them, from a proportionably more distant point of time too. For our own part we believe in the actual fact of one of these periods only; which began, as it is commonly supposed, in B. C. 1322 and ended in A. D. 139. One such is sufficient to prove our point that the equable year is as old in Egypt as the Sothiacal period at least; and therefore is in no case younger than B. C. 1322.

SECTION V.—iv. *The equable year older in Egypt than Memphis, and the ceremony of the installation of the kings at Memphis.*

No city in ancient Egypt laid claim to a greater antiquity than Memphis, except Thebes. There is none too in that country, but Thebes, in favour of which this claim has been more generally conceded by the learned in Egyptian history and antiquities: how truly, or with what foundation, is another question.

It follows that what was as old as Memphis in Egypt must be considered as old as any thing with which the Egyptians themselves were acquainted; as old as their existence as a kingdom, almost as their origin as a nation: as old as Menes the founder of their dynasties, if not of their nation itself. Now the installation or ἐνθρονισμὸς of their kings was as old as Memphis: their kings, from time immemorial, were enthroned or installed at Memphis. We learn this fact from the Scholiast on the Aratus of Germanicus Cæsar[d]: but the ultimate authority for the statement is the Roman Nigidius Figulus, the contemporary of Varro, and his equal in learning of every kind; and the confidential friend of Cicero.

Speaking of the death of Typhon in Egypt, this testimony proceeds: Typhon autem fulmine interficitur ab Apolline in templo Ægypti Memphis: ubi mos fuit solio regio decorari reges qui regnabant: ibi enim sacris initiabantur primum, ut dicitur, reges satis religiose tunicati: et tauro, quem Apim

[d] Ad v. 285, sqq. pag. 70. Cf. Synesius, Opp. 65. (Turnebi 1553) περὶ προνοίας. There are two instances of this ἐνθρονισμὸς at Memphis in the time of the Ptolemies, actually on record; which we may have occasion to notice hereafter.

adpellant, jugum portare fas erat, (quem deum maximum Ægyptii existimant,) et per vicum unum duci: ut periti existimabant labore humanæ necessitatis*, ut (*lege ne*) crudelius quæ sub eis sint abutantur. deducitur autem (rex) a sacerdote Isidis in locum qui nominatur Adytos; et jurejurando adigitur neque mensem neque diem interkalandum, quem in festum diem immutarent, sed ccclxv dies peracturos, sicut institutum est ab antiquis.

This fragment is no doubt corrupt in parts; but its general meaning is intelligible: in particular that of the conclusion. And what is to be inferred from that, except that, if this ceremony of the installation was as old as Memphis, the equable year was still more so? For which of the two could be the older; the cyclical year in Egypt, or this coronation oath administered at Memphis? And what doubt can there be on that point, if this coronation oath itself had no object in view except to bind the kings to the continued use and observance of the cyclical year, *sicut institutum erat ab antiquis?* Memphis then might be of indefinite antiquity: and this ceremony of the ἐνθρονισμὸς or inauguration of the kings there might be as old: but the equable year must have been older than both. There must have been an equable year, the constitution of an older antiquity, before there was yet a Memphis in Egypt, or a ceremony at Memphis like this.

## Section VI.—v. *The equable or cyclical year older in Egypt than their religious rule.*

We may argue in like manner from the nature of the ritual rule of the Egyptians, that the cyclical year in Egypt must have been older than the oldest of their feasts. The testimony just produced, though for a different purpose, is competent to prove this too. For what could be the final end of the oath, exacted from every king at his coronation, not to intercalate either a month or a day, but to use the

* This passage is corrupt; though its meaning is intelligible even as it stands. The context seems to require, "ut experti æstimarent laborem humanæ necessitatis." In what follows, the text in *ut* is evidently to be corrected by *ne:* and probably "quem in festum diem immutarent," by "ne quem festum diem immutarent."

simple cyclical year of 365 days according to the constitution of antiquity, but this; to prevent any change in the cyclical rule of the ritual? It is distinctly declared in the terms of the oath itself; at least if we adopt the correction, (so obviously suggested by the context,) of *ne quem festum diem immutarent;* instead of *quem in festum diem immutarent.* It is very observable too that the terms of the oath ran, Neque mensem neque diem interkalandum: the former of which points at once to the principle of the cyclico-Julian corrections of the primitive calendar, the latter to that of the simple Julian: both the same thing in principle, each alike opposed to a cyclical or revolving calendar, and both, as we have often observed, well known to the ancient Egyptians, not only from their own experience but from that of their neighbours and contemporaries also; after a certain time at least.

It is evident then that, for some reason or other, to confine any of the feasts and observances of the ritual to any one season of the natural year, as they were necessarily confined in the cyclico-Julian and much more in the Julian corrections of the primitive calendar, was contrary to the first principles of the connection of those feasts and observances with their proper times and seasons themselves; in the opinion of the Egyptians at least. It was a point of conscience, a principle of religion with them, that their rites and ceremonies should all be moveable; not indeed in respect of the calendar, but in respect of the natural year: that they should circulate perpetually in the natural year, attached to the same days of the calendar but not to the same seasons of the year.

The question therefore is whether the cyclical calendar of the Egyptians gave occasion to this peculiar ritual rule; or this rule of their ritual gave occasion to the cyclical calendar? in other words, which was the older of the two, the cyclical calendar, or the religious ritual of the Egyptians? With respect to this question we hope to demonstrate in due time that the calendar was incomparably the older of the two. But let us suppose it no older; let the antiquity of the cyclical calendar be only as great as that of their religious system: What is there, connected with Egyptian history and

antiquity, which their admirers at present suppose to be older than this system? If they are consistent with themselves therefore, they must concede an equal antiquity to its cyclical calendar. None of the ancients has borne so clear and explicit a testimony to this peculiarity of the Egyptian rule, (especially in contradistinction to that of the Greeks,) as Geminus: and though that testimony must be familiar to many of our readers, yet because of its importance to the present question we feel ourselves bound to produce it in terms. He illustrates the rule indeed by one case only, that of the Isia: but the principle of the rule was as applicable to every other religious ceremony of the Egyptians as to that. Nor can there be any doubt that every ceremony and observance of their ritual, with its proper cyclical or equable date, circulated round the natural year perpetually, as well as the Isia; and for the same reason as the Isia.

*Οἱ μὲν γὰρ Αἰγύπτιοι*[e] *τὴν ἐναντίαν διάληψιν καὶ πρόθεσιν ἐσχήκασι τοῖς Ἕλλησιν· οὔτε γὰρ τοὺς ἐνιαυτοὺς ἄγουσι καθ' ἥλιον*[f], *οὔτε τοὺς μῆνας καὶ τὰς ἡμέρας κατὰ τὴν σελήνην· ἀλλ' ἰδίᾳ τινὶ ὑποστάσει κεχρημένοι εἰσί. βούλονται γὰρ τὰς θυσίας τοῖς θεοῖς μὴ κατὰ τὸν αὐτὸν καιρὸν τοῦ ἐνιαυτοῦ γίνεσθαι, ἀλλὰ διὰ πασῶν τῶν τοῦ ἐνιαυτοῦ ὡρῶν διελθεῖν, καὶ γίνεσθαι τὴν θερινὴν ἑορτὴν καὶ χειμερινὴν καὶ φθινοπωρινὴν καὶ ἐαρινήν. ἄγουσι γὰρ τὸν ἐνιαυτὸν ἡμερῶν τριακοσίων ἑξήκοντα πέντε· δώδεκα γὰρ μῆνας ἄγουσι τριακονθημέρους, καὶ πέντε ἡμέρας ἐπάγουσι· τὸ δὲ* $\frac{\alpha}{\delta}$ $(\frac{1}{4})$ *οὐκ ἐπάγουσι, διὰ τὴν προειρημένην αἰτίαν, ἵνα αὐτοῖς ἀναποδίζωνται αἱ ἑορταί. ἐν γὰρ τοῖς δ′ ἔτεσι μιᾷ ἡμέρᾳ ὑστεροῦσι παρὰ τὸν ἥλιον· ἐν δὲ τοῖς μ′ ἔτεσι ι′ ἡμέραις ὑστερήσουσι παρὰ τὸν τοῦ ἡλίου ἐνιαυτόν . . . . ἐν δὲ τοῖς ρκ′* (aliter *ρκε′*) *ἔτεσι μηνιαῖον ἔσται τὸ παράλλαγμα καὶ πρὸς τὸν τοῦ ἡλίου ἐνιαυτὸν καὶ πρὸς τὰς κατὰ τὸ ἔτος ὥρας. . . .*

*Ὅθεν τὰ Ἴσια*[g] *πρότερον μὲν ἤγετο κατὰ τὰς χειμερινὰς τροπὰς, καὶ πρότερον δ' ἔτι κατὰ θερινὰς τροπάς· ὡς καὶ Ἐρατοσθένης ἐν*

[e] Cap. vi. Uranologium, 33 B.

[f] It would be a mistake to infer from these words, that Geminus meant to say the year of the Egyptians was not *solar*. He means to say only, it was not solar in such a sense as to bear date perpetually from any of those points or epochs in the natural year, which are the natural epochs of a solar year; viz. the vernal equinox, the autumnal equinox, the summer solstice, or the winter solstice. He never could intend to say that the civil year of the Egyptians was not *solar* in opposition to any lunar year; such as that of the Greeks in his time generally.

[g] Ibid. 34 C.

*τῷ περὶ τῆς ὀκταετηρίδος ὑπομνήματι μνημονεύει. καὶ ἀχθήσεται πάλιν κατὰ φθινόπωρον, καὶ κατὰ τὰς θερινὰς τροπὰς, καὶ κατὰ τὸ ἔαρ, καὶ κατὰ τὰς χειμερινὰς τροπάς· ἐν ἔτεσι γὰρ χιλίοις τετρακοσίοις ἑξήκοντα ἅπασαν ἑορτὴν διελθεῖν δεῖ διὰ πασῶν τῶν τοῦ ἐνιαυτοῦ ὡρῶν, καὶ πάλιν ἀποκατασταθῆναι ἐπὶ τὸν αὐτὸν καιρὸν τοῦ ἔτους.*

That this is a correct description of the gradual recession of a given term in the year of 365 days, on any given term in the mean Julian year of 365 days 6 hours, is evident. The instance selected, to illustrate this phenomenon, is that of the Isia. But it is not selected for this purpose *hypothetically*. It is cited as an *historical* example of the phenomenon. It is plainly recognised in these words as an historical fact that the Isia, before the time of Geminus, had once fallen on the winter solstice; and, before the time of Eratosthenes, had once fallen on the summer solstice; and it is implied that they were known to have once fallen even at the autumnal equinox, by its being said that they would *again* fall at the autumnal equinox, as well as at the summer solstice. This, as we shall see hereafter, is a remarkable observation; for it takes us back at once to the institution of the Isia themselves; and to the very first celebration of that ceremony among the Egyptians. It is sufficient to observe however that, to arrive even at the period when this feast was falling on the summer solstice before the time of Geminus or that of Eratosthenes, we must go very far back. We shall not find it later than B. C. 958. Much more to arrive at the time when it could have been falling at the autumnal equinox; which, as every one must comprehend from the preceding passage itself, could not have been less than 360 years earlier at least. So far back then must this peculiar rule of the Egyptian ritual have been already in existence; and so far back also the cyclical and revolving calendar, to which that rule was adapted, and on which only it could possibly have been founded.

### SECTION VII.—vi. *Name of the Nile, and intercourse of the Greeks with Egypt.*

The cyclical year in Egypt was older than the first acquaintance of the Greeks with Egypt; whensoever that may

be supposed to have begun. It was older at least than the name of the Nile, as known to the Greeks. We may infer that from the explanation of this name handed down by the Greeks; an explanation which must have been invented by the Greeks, because it holds good only in their language. One of the Greek definitions of the name of the Nile indeed is *νέα ἰλύς*. But this is not what we mean; nor is it that which is most characteristic of the Greeks, and of their peculiar modes of thinking.

The numerical value of the letters which compose the word Νεῖλος in Greek is just equal to 365; that is, to the number of days in the equable year: on the strength of which coincidence the Greeks tell us that this name was purposely given it in order to represent the length of that year.

| | |
|---|---|
| Ν = | 50 |
| Ε = | 5 |
| Ι = | 10 |
| Λ = | 30 |
| Ο = | 70 |
| Σ = | 200 |
| ΝΕΙΛΟΣ = | 365. |

*Καὶ οὐδὲν ἄλλ' ἢ τὸν ἐνιαυτὸν ἀντικρὺς εἶναι τὸν Νεῖλον· τοῦτο καὶ τῆς προσηγορίας ἐκβεβαιουμένης. τῶν γοῦν κατὰ τοὔνομα στοιχείων εἰς ψήφους μεταλαμβανομένων, πέντε καὶ ἑξήκοντα καὶ τριακόσιαι μονάδες, ὅσαι καὶ τοῦ ἔτους ἡμέραι, συναχθήσονται*[h].—*Τρίτωνος ἐκβολαῖσιν ἠλοχισμένην*[i]· *ὅτι τρὶς μετωνομάσθη (ὁ Νεῖλος), Ὠκεανὸς,...Ἀετὸς...; Αἴγυπτος...ἢ πρὸς ἀναλογίαν ἡμερῶν τοῦ ἐνιαυτοῦ· οἱ γὰρ περὶ Νεῖλον οἰκοῦντες ἐφεῦρον, φασὶ, τὴν ψῆφον τῶν ἡμερῶν τοῦ ἐνιαυτοῦ.—Οἱ Αἰγύπτιοι τὸν ἐνιαυτὸν ἀπὸ τῆς τοῦ Νείλου ἀναβάσεως τεκμαίρονται. (καὶ) διὰ τοῦτό φασιν ὀνομασθῆναι καθ' Ἕλληνας οὕτω. τὸ γὰρ Νεῖλος (ὄνομα) ἀναλυόμενος εἰς ἀριθμοὺς τῶν τοῦ ἐνιαυτοῦ τξ' καὶ (ε') ἡμερῶν ἀποτελεῖ τὴν ποσότητα*[k].—*Ἐπειδὴ εἱρμῷ τινι καὶ τάξει φέρεται, καὶ οὐ παραπροθεσμεῖ τὴν ἀνάβασιν. διὸ καὶ τῇ αὐτῇ (αὐτοῦ) ὑπερβάσει φασὶ μετρεῖσθαι παρὰ τοῖς ἐγχωρίοις τὸν ἐνιαυτόν. καὶ τὸν Νεῖλον δὲ, ὀφείλοντα διὰ διχρόνου μόνου τοῦ ἰῶτα γράφεσθαι (Νῖλον) ὡς ἀπὸ*

[h] Heliodori Æthiopica, ix. 22. [i] Lycophron, 119. and Schol. in loc.
[k] Anecdota Parisiensia, iv. 261. 25. Cod. 2720. Παρακολουθήματα Γραμματικά.

*τῆς ἰλύος, ὅμως διὰ τοῦτό φασι τὴν διὰ διφθόγγου γραφὴν ἀποφέρεσθαι, ὡς ἂν ἔχῃ πληροῦν καὶ τῇ ποσότητι τῆς ἀριθμητικῆς δυνάμεως τῶν ἐν αὐτῷ γραμμάτων τὸν ἐνιαύσιον καιρόν. τὸ γὰρ Νεῖλος κατὰ τὴν δύναμιν τῶν ἐν αὐτῷ στοιχείων ποσούμενον τὸν τξέ ἀριθμὸν συντελεῖ, ὁπόσαι εἰσὶ καὶ αἱ κατ' ἐνιαυτὸν ἡμέραι*[l].

It does not appear that any such coincidence held good of the name of the Nile in the old Egyptian character. This numerical definition of the name is undoubtedly of Greek origin, and is as undoubtedly fanciful, and founded on a purely accidental coincidence. It proves however that in the opinion of the Greeks the civil year of Egypt and the Nile of Egypt were one as old as the other. Nor is it any objection that this word Νεῖλος does not occur in Homer. The question is not which of the Greeks first gave the Nile this name, or was the first to use this name; but what the Greeks supposed to be meant by it; and what was further implied by such an opinion as that. Yet the word occurs in Hesiod: whom many of the learned suppose to have been as old as Homer. What could the Greeks have known of, more ancient in Egypt, or more characteristic of Egypt, than its year of 365 days? if even the Nile, a river no doubt as old as Egypt itself and older than the inhabitants of Egypt, must derive its name from that.

SECTION VIII.—vii. *Particular statements or facts of antiquity from which the nature of the Egyptian calendar at the time may be conjectured.*

i. Herodotus[m]: Πρώτους Αἰγυπτίους ἀνθρώπων ἁπάντων ἐξευρέειν *τὸν ἐνιαυτὸν δυώδεκα μέρεα δασαμένους τῶν ὡρέων ἐς αὐτόν. ταῦτα δὲ ἐξευρέειν ἐκ τῶν ἄστρων ἔλεγον. ἄγουσι δὲ τοσῷδε σοφώτερον Ἑλλήνων, ἐμοὶ δοκέειν, ὅσῳ Ἕλληνες μὲν διὰ τρίτου ἔτεος ἐμβόλιμον ἐπεμβάλλουσι, τῶν ὡρέων εἵνεκεν· Αἰγύπτιοι δὲ τριηκοντημέρους ἄγοντες τοὺς δυώδεκα μῆνας*[n] *ἐπάγουσι ἀνὰ πᾶν ἔτος πέντε ἡμέρας πάρεξ τοῦ ἀριθμοῦ. καί σφι ὁ κύκλος τῶν ὡρέων ἐς τὠὐτὸ περιϊὼν παραγίνεται.*

ii. Diodorus Siculus, speaking of the burial-place of Osiris

[l] Eustathius, ad Dionysium Periegeten, 221.

[m] ii. 4: cf. Gaza, De Mensibus, viii. Uranologium, 291 E—292 A: xi. 298 D—299 B: xix. 308 B.

[n] Cf. Horapollo, i. 4: pag. 6: 8. p. 12: 10. p. 18: 66. p. 78: which shew that the Egyptian months were ordinarily thus reckoned.

at Philæ, in the *insula Nili*: Σημεῖα δὲ τούτου δεικνύουσιν .... τόν τε τάφον, τὸν κατεσκευασμένον Ὀσίριδι, κοινῇ τιμώμενον ὑπὸ τῶν κατ' Αἴγυπτον ἱερέων, καὶ τὰς περὶ τοῦτον κειμένας ἑξήκοντα καὶ τριακοσίας χοάς. ταύτας γὰρ καθ' ἑκάστην ἡμέραν γάλακτος πληροῦν τοὺς πρὸς τούτοις ταχθέντας ἱερεῖς, καὶ θρηνεῖν ἀνακαλουμένους τὰ τῶν θεῶν ὀνόματα[o].—Ἐν μὲν γὰρ Ἀκάνθων πόλει πέραν τοῦ Νείλου κατὰ τὴν Λιβύην ἀπὸ σταδίων ἑκατὸν καὶ εἴκοσι τῆς Μέμφιδος πίθον εἶναι τετρημένον, εἰς ὃν τῶν ἱερέων ἑξήκοντα καὶ τριακοσίους καθ' ἑκάστην ἡμέραν ὕδωρ φέρειν (εἰς αὐτὸν) ἀπὸ τοῦ Νείλου[p].

In both these instances there is an allusion in the numbers specified to the days of the Egyptian year; the epagomenæ only being omitted, on the principle which we explained supra[q]. It is not impossible indeed that in these two particular services, for special reasons, the epagomenæ might be intentionally excepted. But in either case the inference as to the number of the days of the year itself will be just the same. There is another passage of Diodorus however, in which there is a direct allusion to the number of the days of the year; and there it is stated in terms at 365. This is the well known passage which contains the description of the tomb of Osymandyas at Thebes[r]: in which those, who have made the monuments and sculptures of Egypt their study, profess to recognise something like the still existing Ramesseum or Memnonium; one of the most famous of those antiquities themselves. On this principle the equable year of 365 days must have been as old as the time of Rameses, or Ramses, from whom this monument derives its name.

iii. Speaking of the degree of fineness to which threads of flax might be spun, and after mentioning some other examples of the kind, Pliny insists more particularly on the following, as one of the most remarkable of all[s]: Mirentur hoc ignorantes in Ægyptii quondam regis quem Amasim vocant thorace, in Rhodiorum insula ostendi, in templo Minervæ, ccclxv filis singula fila constare: quod se expertum nuper Romæ prodidit Mutianus ter consul, parvasque jam reliquias ejus superesse hac experientium injuria[t].

[o] i. 22. [p] i. 97.
[q] Diss. viii. ch. 1. sect. iii. vol. i. 614.
[r] i. 47–49: cap. 49.
[s] H. N. xix. 2. § 2.
[t] Cf. Ælian, De Natura Anim. ix. 17: who, though nearly 200 years later than Pliny, implies it was still in existence even in his time.

We learn from Herodotus[u] that this thorax was dedicated by Amasis in the temple of Minerva at Lindus in Rhodes: he tells us at the same time of another thorax, of similar materials and workmanship, which Amasis intended as a present to the Lacedæmonians, if the Samians had not intercepted it, before it reached its destination: *Τῶν δὲ εἵνεκα θωϋμάσαι ἄξιον, ἁρπεδόνη ἑκάστη τοῦ θώρηκος ποιέει. ἐοῦσα γὰρ λεπτὴ ἔχει ἁρπεδόνας ἐν ἑωϋτῇ τριηκοσίας καὶ ἑξήκοντα πάσας φανεράς. τοιοῦτος ἕτερός ἐστι καὶ τὸν ἐν Λίνδῳ ἀνέθηκε τῇ Ἀθηναίῃ Ἄμασις.*

Here there can be no question that 360 is put for 365. In each it is morally certain that this number must have been pitched upon in imitation of the days of the year. Consequently the year was still equable in the time of Amasis. This fact indeed is proved by inscriptions in the hieroglyphical character on tombs in Egypt, belonging to his reign; which have been discovered and deciphered[x].

In like manner, the hydraulic clock of Ctesibius of Alexandria, constructed long after this time, and described by Vitruvius[y], was so contrived as to run without interruption for 365 days, that is, one equable year, but no longer. So that whether this artist was contemporary with the first Ptolemy surnamed Euergetes, or with the second, the civil year was still equable in his time, as it had always been.

iv. We shall conclude this part of the present dissertation with the following testimonies, to none of which, except the first, is much importance to be attached; though, taken along with all that precedes to the same effect, the rest may contribute their share to the illustration of our two propositions. They are consistent at least with every testimony of the same kind of older date.

i. *Ὁ μὲν οὖν Αἰγύπτιος ἐνιαυτὸς οὐκ ἐπιλογίζεται τὸ δ′, δι' ὃ οὐ προστίθησι ταῖς ἐπαγομέναις πέντε οὔσαις ἐπὶ τοῖς μησὶ τριακονθημέροις οὖσι διὰ δ′ ἐτῶν μίαν ἡμέραν ὥστε ἑξήμερον ποιεῖν· ἀλλ' ἐπισυναγόμενον τὸ δ′ τοῦτο καὶ μῆνας τοὺς παρ' αὐτοῖς μεθίστησι, τῶν* (supple *μηνῶν* or *τούτων*) *ἀνὰ πάσας τὰς ὥρας ἀνακαλουμένων* (lege *ἀνακυκλουμένων*)[z].

ii. *Οἱ δὲ παλαιοὶ Αἰγύπτιοι τξε′ ἡμερῶν τιθέμενοι τὸν ἐνιαυτὸν*

u iii. 47.

x Nolan, Egyptian Chronology, part iii. sect. iii. p. 328. Lond. 1848.

y ix. 6. 279–285. Cf. Anthologia Græca, i. 235; Callimachus, viii; Athenæus, iv. 75: xi. 97.

z Ptolemæi Opera, iv: Proclus Diadochus in Hypotyposes, p. 88.

*μόνον, καὶ οὐχὶ τξε′* (*καὶ δ′, ita supp.*) *ὡς οἱ Ῥωμαῖοι καὶ Ἕλληνες καὶ Ἀλεξανδρεῖς, κατὰ ͵αυξ′ ἔτη καὶ αὐτοὶ μετὰ τῶν Ἀλεξανδρέων τε καὶ Ἑλλήνων τῇ* (*κθ′ τοῦ Αὐγούστου*) *τοῦ ἔτους ἀπάρχονται· καὶ μετὰ δ′ ἔτη πρὸ μιᾶς ἡμέρας, τουτέστι τῇ κη′ τοῦ Αὐγούστου μηνός· καὶ οὕτω κατὰ δ′ ἔτη μίαν ἡμέραν προλαμβάνοντες διὰ τῶν εἰρημένων ͵αυξ′ ἐτῶν ἀποκαθίστανται. τετράκις γὰρ τξε′ γίνονται χίλια υξ′* [a].

iii. *Ἕλληνες δὲ, παρὰ Χαλδαίων εἰς Αἰγυπτίους διὰ τοῦ πατριάρχου Ἀβραὰμ ὡς ὁ λόγος τὴν αὐτὴν ἐλθοῦσαν γνῶσιν παραλαβόντες, κατ' Αἰγυπτίους τξε′ ἡμερῶν τὸν ἐνιαυτὸν ἐλογίσαντο· ἀρχόμενοι μὲν ἀπὸ τοῦ παρ' αὐτοῖς Θὼθ μηνὸς τῆς πρώτης ἡμέρας, ἥτις κατὰ τὴν κθ′ τοῦ Αὐγούστου μηνὸς συμπίπτει, καὶ κατὰ χρόνους δ′ ἀμείβοντες μίαν ἡμέραν ἕως ἀποκαταστάσεως ἡμερῶν Αἰγυπτιακοῦ ἔτους τξε′ διὰ ͵αυξ′ ἐτῶν συμπληρωμένου* (lege *ἕως ἀποκαταστάσεως Αἰγυπτιακοῦ ἔτους, ἡμερῶν τξε′, διὰ ͵αυξ′ ἐτῶν συμπληρουμένου* [b]).

## CHAPTER II.

*Particular arguments of the nature of the Egyptian calendar. Review of dates on record, from the epoch of the Æra of Nabonassar downwards.*

### SECTION I.—*Epoch of the Æra of Nabonassar, and of the Tables of Ptolemy.*

THE materials of our proposed review of such equable dates in terms of the Egyptian calendar, as are on record, are supplied in the greatest abundance by the Magna Compositio of Ptolemy. But before we can proceed to make any use of the data which occur in this work, it is necessary to say something of the epoch of the Tables of Ptolemy; which is also that of the Æra of Nabonassar.

The use which Hipparchus appears to have made of this æra, and of the dates connected with it, before Ptolemy, and the similar use made of it by Ptolemy after him, are sufficient, in our opinion, to justify the inference that though the style of the æra, to which all these dates are attached, may

[a] Selecta ad illustrationem Chronici Paschalis, v. tom. ii. p. 114. From the Chronicon of Severus.

[b] Syncellus, i. 591. l. 8.

have been proper to Babylon, the style of the calendar, the days of the month at least, in which they are all recorded, must have been equally proper to Egypt. There could have been no difference between the calendar of Babylon and that of Egypt, except perhaps in the names of the months. We have not been able to satisfy ourselves that at the epoch of the æra of Nabonassar the Babylonian calendar had proper names for its months; though the Egyptian certainly had: but we have seen every reason to conclude that long before the rise of the æra of Nabonassar, and at the time of its rise, and long after it too, there was no difference in any essential respect between the civil calendar of the Babylonians and that of the Egyptians. Both were the equable calendar of primitive antiquity. Both were the equable calendar of our own Fasti.

Nothing was easier therefore than to transfer even proper Babylonian dates to the Egyptian calendar. It was merely to substitute Thoth for the first month, Phaophi for the second; and so on. If such was actually the case, neither Hipparchus nor Ptolemy could have been ignorant of it. And thus the occurrence of proper Babylonian dates in the style of the proper æra of Babylon, yet under proper Egyptian names, first in the references of Hipparchus, and afterwards in those of Ptolemy, is easily explained and accounted for.

No æra in all antiquity is more illustrious than this of Nabonassar. None has been so generally known and used, except the Christian of later date. Chronologers, astronomers, historians, ancient and modern, have all had an equal interest in it. None has been uniformly considered more important to science; none to be so closely connected with the most important questions of chronology and history. None therefore has attracted more attention; none has been so thoroughly sifted and examined; and none, it might be supposed, could now be better understood, or have been more accurately determined as to all its circumstances; and more especially with regard to its epoch or date.

The first year of this æra indeed, in terms of the æra vulgaris, has not been mistaken; nor even the first day of the æra, in the proper Julian style of the æra vulgaris, and in

the proper Nabonassarian style, adapted to the proper Julian perpetually. And yet it may still be asserted with truth, that the actual date of the day, on which this æra first came into existence at Babylon, has never been known to chronologers of modern times. It is brought to light for the first time in our Fasti Catholici, by the true course of equable time, from the beginning of things until then. But to return for the present to our proper subject, the epoch of the Tables of Ptolemy.

These tables bear date at *noon*, according to the astronomical rule; and, as carried back to the epoch of the æra of Nabonassar, they bear date on the first of the Egyptian Thoth, in the first year of the æra, at noon. This appears from the general intimation, Ἐπειδὴ τὰς ἐποχὰς ἀπὸ μεσημβρίας συνιστάμεθα [c]: and from the observation of the autumnal equinox in the 17th year of Adrian, Athyr 7, two *hours* of equinoctial time after *noon*, yet 879 equable years, 66 days, 2 hours complete from the epoch, Thoth 1 Nab. 1 also: Καὶ ἀπὸ τοῦ α′ ἔτους ἄρα Ναβονασσάρου κατ' Αἰγυπτίους τῆς ἐν τῇ τοῦ Θὼθ α′ μεσημβρίας ἕως τοῦ χρόνου τῆς ἐκκειμένης μετοπωρινῆς ἰσημερίας συναχθήσεται ἔτη Αἰγυπτιακὰ ωοθ′ καὶ ἡμέραι ξϛ′ καὶ ὧραι ἰσημεριναὶ β′ [d]: the object of which calculation itself was to determine the place of the sun at the epoch in question [e], Thoth 1 at noon.

Let us attend however in the first place to his own account of the manner in which this problem was determined [f]: Λοιποῦ δ' ὄντος τοῦ τὴν ἐποχὴν τῆς ὁμαλῆς τοῦ ἡλίου κινήσεως συνίστασθαι πρὸς τὰς τῶν κατὰ μέρος ἑκάστοτε παρόδων ἐπισκέψεις, ἐποιησάμεθα καὶ τὴν τοιαύτην ἔκθεσιν, ἀκολουθοῦντες μὲν καθόλου πάλιν ἐπί τε τοῦ ἡλίου καὶ τῶν ἄλλων ταῖς ὑφ' ἡμῶν αὐτῶν ἀκριβέστατα τετηρημέναις παρόδοις, ἀναβιβάζοντες δὲ ἀπ' αὐτῶν τὰς τῶν ἐποχῶν συστάσεις εἰς τὴν ἀρχὴν τῆς Ναβονασσάρου βασιλείας διὰ τῶν ἀποδεικνυμένων μέσων κινήσεων, ἀφ' οὗ χρόνου καὶ τὰς παλαιὰς τηρήσεις ἔχομεν ὡς ἐπίπαν μέχρι τοῦ δεῦρο διασωζομένας.

It is evident from this representation that Ptolemy had to

c Lib. iii. vi. 204. Cf. cap. viii. 208: 210: end of lib. iii. Lib. iv. vii. 264: viii. 272: x. 276–278. Lib. vi. ii. 374, 375. Lib. ix. i. 191. Lib. x. v. 209: x. 241. Lib. xi. iv. 267: viii. 292. Cf. Opp. iv. 46, 47–49: 51–54: 56–59; Hypotyposes τῶν πλανωμένων.

d iii. vi. 204.

e iii. vii. 210.

f iii. vi. 202.

determine the epoch of his tables, even as referred to this æra, for himself: and that he did this just in the same way as any astronomer at present, who had the same problem to solve for himself, would do it also. It follows that he could have been aware of no historical or traditionary epoch of the æra, handed down from the beginning of the æra itself; which might have saved him this trouble. We mean, no historical or traditionary statement of the mean or of the actual longitude of the sun, or of the moon, or of any other of the heavenly bodies, at noon, on the first of Thoth at the epoch of the æra. It must be evident too that none such could have been known to Hipparchus.

Now this is an important conclusion. Ptolemy's epoch is nominally attached to Thoth 1, Nab. 1 at noon; but really to Feb. 26 B. C. 747 at noon: and had that day, together with its characteristic phenomena, in terms of the Babylonian or of the Egyptian calendar, been actually handed down as the epoch of the æra; it would have involved us in no slight perplexity. It is manifest however that this could not have been the case. Neither Ptolemy nor Hipparchus knew of any such traditional date of the æra. They had to determine it for themselves, by reckoning back from their own time, and by means of data derived from the phenomena of their own time. They went back to the epoch of the æra, because they knew of observations which extended back to the epoch of the æra also; of which they were desirous of making use. They were aware of observations at least, recorded in terms of the æra from the first, whether such observations themselves actually began in the first year of the æra or not; for this is a different question, concerning which we shall have occasion to say something by and by.

The longitude of the sun, at the epoch, thus determined by Ptolemy, was found to be 11 s. 0° 45′[g]: and this must be understood of the *mean* longitude, and for the meridian of Alexandria not for that of Babylon, Thoth 1 at noon Nab. 1[h]. He obtained his lunar epoch for his lunar tables, for the same meridian and on the same day and at the same time of the day, in a corresponding manner[i]: Πρῶτον μὲν γὰρ, *ἵνα πάλιν καὶ τὰς τῶν μηνῶν ἐποχὰς ὥσπερ καὶ τὰς ἄλλας ἀπὸ τοῦ*

[g] Lib. iii. vi. 205: viii. 210. [h] Cf. vi. iv. 387. [i] Lib. vi. ii. 374: cf. iv. 304.

*πρώτου ἔτους Ναβονασσάρου συστησώμεθα, τὴν ἀποδεδειγμένην ἐν τῷ ἔτει τούτῳ Θὼθ νεομηνίᾳ κατ᾽ Αἰγυπτίους τῆς μεσημβρίας ἐπουσίαν ἐποχῆς, μοιρῶν οὖσαν ο′ λζ′,* (70° 37′,) *παραβάλλοντες παρὰ τὸ ἡμερήσιον μέσον κίνημα τῆς ἀποχῆς εὕρομεν ἡμέρας ε′ μζ′ λγ′* (47 firsts, 33 seconds, in the sexagesimal notation *), *ὡς πρὸ τοσούτων γεγονέναι τὴν τῆς ἐν τῇ νεομηνίᾳ τοῦ Θὼθ μεσημβρίας προγεγουνῖαν μέσην σύνοδον. καὶ ἡ ἑξῆς ἄρα γέγονε μετὰ ἡμέρας κγ′ μδ′ ιζ′ ἔγγιστα τῆς αὐτῆς μεσημβρίας, τουτέστι μετὰ ἑξηκοστὰ ἡμέρας μιᾶς μδ′ ιζ′ τῆς ἐν τῇ κδ′ μεσημβρίας.*

The meaning of this is that the moon's mean distance (i. e. elongation) from the sun, at noon, Thoth 1 Nab. 1. was 70° 37′ : from which Ptolemy collected the date of the mean conjunction last before, 5 days, 19 h. 1 m. 12 sec. of mean time before Thoth 1 at noon; and the mean conjunction next after, 23 days, 17 h. 42 m. 48 sec. of mean time after Thoth 1 at noon : and, supposing Thoth 1 Nab. 1 at noon to have corresponded to Feb. 26 B. C. 746 at noon, the former comes out Feb. 20 16 h. 58 m. 48 sec. from midnight, the latter, March 22 5 h. 42 m. 48 sec. from midnight; which the eclipses recorded in Pingré for this year, and our general lunar calendar also, shew to be in perfect agreement with the truth.

It cannot therefore be denied that at first sight there is good foundation for the observation of La Lande, with respect to the epoch of this celebrated æra[k]. "Il ne peut y avoir de doute sur cette époque : car on trouve dans Ptolémée le lieu de toutes les planètes pour le commence-

* According to this division, 1 m. = 24 m. of mean time : 1 sec. = 24 sec. 1th. = 24th. and so on. Hence

| | | | h. m. s. | |
|---|---|---|---|---|
| 47 f. of the sexages^mal divis^n | = | 24 m. × 47 = | 18 48 0 | |
| 33 sec. | = | 24 sec. × 33 = | 13 12. | |
| 47 m. 33 sec. | = | | 19 1 12. | |
| 5 d. 47 f. 33 sec. | = | | | 5d. 19h. 1m. 12s. |
| | | | h. m. s. | |
| 44 f. | = | 44 m. × 24 = | 17 36 0 | |
| 17 sec. | = | 17 sec. × 24 = | 6 48 | |
| 44 f. 17 sec. | = | | 17 42 48 | |
| 23d. 44f. 17 sec. | = | | | 23d. 17h. 42m. 48s. |

k Ptolemy, Halma, tom. i : Preface, p. xxx. xxxi.

ment de cette époque, et il ne peut y avoir qu'une seule année et un seul jour qui réponde à la fois à toutes ces longitudes. Celle de la lune surtout confirme parfaitement la date dont il est question*."

All this is true of the Julian Feb. 26 B. C. 747: and even of the Nabonassarian Thoth 1, Nab. 1. of our tables themselves. And yet notwithstanding Feb. 26 B. C. 747 at mean noon was not the proper Julian date of the æra, when it actually took its rise at Babylon; but one day earlier, Feb. 25, reckoned according to the same rule from mean noon.

It will be seen from our Fasti Catholici that, all through the 26th of our Julian periods, there was still one day's difference between the cyclical and the Nabonassarian style of the reckoning of equable time: that the proper Nabonassarian term, which was corresponding to the first of the cyclical Thoth through the whole of this period, was epagomene 5, and the cyclical term, which was corresponding to the Nabonassarian Thoth 1, was Thoth 2. The æra of Nabonassar took its rise at Babylon in æra cyclica 3260; which answered at that time to A. M. 3257 dated from the mean vernal equinox, to A. M. 3258 dated from Jan. 1; and in the æra vulgaris to B. C. 748 dated from the vernal equinox, or B. C. 747 dated from Jan. 1. It came into being consequently in the 122nd year of the xxvi period dated from Jan. 1; in the 121st dated from the vernal equinox: in either case, 19 years before the end of the period itself.

It was impossible, under these circumstances, that the true first of Thoth at Babylon, æra cyclica 3260, and the first of Thoth Nab. 1, could yet be the same. There must still be one day's difference between them. All the coincidences therefore, and all the criteria, which calculation discovers to characterise the epoch of this æra, may be true and must be true of Feb. 26 B. C. 747: but they cannot be

* La Place calculated the moon's elongation in particular for Feb. 25, 22 h. 8 m. 39 s. Paris time of mean noon at Alexandria; and made it 70° 39′ 47″. See Halma's Ptolemy, iii. Memoir of Mr. Ideler, (Recherches historiques sur les observations astronomiques des anciens,) p. 172; cf. 115: cf. also tom. i. Preface, xxx: and Bailly, Astronomie Indienne, ch. x. §. xxxv. 291.

true, and will not be true, of the first of Thoth æra cyclica 3260: only of the first of Thoth Nab. 1—the true cyclical coordinate of which at this time was Thoth 2, not Thoth 1. What we have asserted consequently is strictly true. There was one day's difference between the true Thoth 1 at Babylon, at the epoch of the æra of Nabonassar, and the Nabonassarian Thoth 1. The latter was Feb. 26 at mean noon, by the astronomical rule: the former, according to the same rule, was Feb. 25 at mean noon.

The truth and reality of this distinction, and at this point of time, between the two styles of annual and of noctidiurnal time, is attested by another matter of fact which the history of the Babylonian calendar in particular brings to light. It is a singular circumstance that though the oldest lunar observations, of which any thing is known at present, appear to have been made at Babylon; not a single solar observation is known to have been made there. Ten lunar observations (that is ten lunar eclipses) observed there have been transmitted to posterity; and those too (excepting the three first) at such great distances of time asunder, that, if the Babylonians had a continued series of such observations, of which each of these, in its proper order of time, made only a part, they could not have extended over less than 340 years. In the course of this period, the number of solar eclipses would be much greater than that of lunar; and many of these must have been visible at Babylon: yet not a single solar eclipse is known to have been recorded there.

If this should appear improbable *a priori*, (as no doubt it very possibly may do,) it should be remembered that the state of the case was the same in China also; with this difference only, that the Chinese had abundance of observations of solar eclipses, but none, or next to none, of lunar. We have seen that there was a reason for this distinction in the case of the Chinese[1]; and we may take it for granted that there was some reason for the opposite distinction in the case of the Babylonians; though what that may have been is open to question, and we cannot now stop to inquire. The fact is certain, that no solar observation, made and recorded at Babylon, has been transmitted to posterity:

[1] Diss. v. ch. iv. sect. xii. vol. i. p. 382.

and the inference from this fact, if not certain, is in the highest degree probable; viz. that nothing of the kind, which might have been handed down to posterity, was ever made and recorded there: by solar observations in general solar eclipses in particular being understood.

Now it appears that, in the first year of the æra of Nabonassar, and at the very end of that year, the astronomers of Babylon, for the first time, so far as any thing is discoverable to the contrary, associated with their equable solar year its natural lunar cycle, the Apis cycle: but proposing, for some reason or other, to confine their attention to lunar eclipses and to lunar phenomena in general, they fixed the epoch of the cycle not to the luna prima or conjunction, but to the luna quintadecima or full. The first year of Nabon. *exeunte* corresponded to B. C. 746: and it will be seen, from the ecliptic tables of Pingré, that there was a lunar eclipse that year, Jan. 26 2 h. 30 m. A. M. for the meridian of Paris, Jan. 26 5 h. 18 m. A. M. for that of Babylon: which must consequently have been visible at Babylon, and must have served as an infallible criterion of the true full moon in the last month of Nabon. 1.

The mean full moon next after this is easily calculated for Feb. 24. 18 h. 2 m: that is, as nearly as possible, the beginning of the 1st of Thoth æra cyc. 3261—which was Feb. 24 at 18 hours, B. C. 746, too. The epoch of the first Apis cycle of the Chaldees was attached to this date of Thoth 1 æra cyc. 3261 Nab. 1 *exeunte*, Feb. 24 at 18 hours: and the coincidence just pointed out, together with the considerations premised respecting the object proposed by the association of the lunar with the equable solar reckoning, in the shape of the Apis cycle, at all, (viz. to facilitate the calculation and observation of lunar eclipses,) must do much to explain the reason why; i. e. because it was also the date of the full moon. We are able to trace this cycle, so introduced into the Babylonian calendar and at this time, and so attached to the luna quintadecima, down to a late period: though this is not the proper place to enter upon that investigation.

Now we have already observed that the tables of Ptolemy were purposely carried back to the epoch of the æra of Nabonassar, and were purposely attached to it; because of the

observations which were known to be in existence, bearing date from the same epoch also. And yet no observation is actually referred to by him, and none appears to have been referred to by Hipparchus before him, which comes within less than 26 years of this epoch. This too is a remarkable circumstance. The tables of Pingré shew that there were quite as many lunar eclipses in the first 26 years of the æra of Nabonassar as in the next; 41 or 42 in each: many of which must have been observed and recorded too at Babylon. Why then did neither Hipparchus nor Ptolemy make use of any of these? if they were the oldest, and therefore the most valuable of all; and if they were just as authentic and trustworthy as any of the rest. And in this one respect it might be supposed there could be little or no difference. The credit of observations made in the first 26 years of the æra must have been just as good as that of observations made in the next.

We much question however whether it was not this consideration of the credit and authority due to the observations of these first 26 years in particular which actually deterred both Hipparchus and Ptolemy from making any use of them, in preference to the rest. After what has been shewn of the difference still existing between the true Nabonassarian style, as constantly equated to the cyclical, and the simple Nabonassarian, carried back to the epoch of the æra of Nabonassar; it will easily be comprehended that, however correctly these observations might have been recorded at Babylon in the true equable style of the time, they must have appeared to Hipparchus and to Ptolemy to involve an error amounting to a day; and an error of excess not of defect.

For example, an eclipse appears in Pingré B. C. 738, Feb. 26. 14 h. 45 m. at Paris: Feb. 26. 17 h. 33 m. at Babylon. Its cyclical date at Babylon must have been Thoth 4 *exeunte*, or Thoth 5 *ineunte*, Nab. 10; the first of the cyclical Thoth falling at that time on Feb. 22 at 18 hours. The Nabonassarian Thoth at the same time was falling Feb. 23 at 18 hours: and therefore the Nabonassarian date of this eclipse was Thoth 3 *exeunte*, or Thoth 4 *ineunte*, Nab. 10; a day earlier in the equable style than the former. This latter however was the only equable date which calculation, carried

back from the time of Hipparchus or of Ptolemy in terms of the Nabonassarian reckoning, could possibly arrive at: and that being the case, since neither Hipparchus nor Ptolemy was likely to suspect the true cause of the discrepancy, (i. e. the false and erroneous standard of equable time of which they themselves were making use,) they could not ascribe it to any thing but to the inaccuracy of the observation, or to some mistake in its date. For some reason or other, it must be in error; and therefore it was not to be trusted; it was not to be appealed to; it was not to be cited and applied for any purpose which required not merely the oldest but the most authentic aud unquestionable data.

But this differencc between the two styles would hold good only to the end of period xxvi: with the ingress of period xxvii B. C. 728 it would disappear. From that time forward a given Babylonian date even in constant conjunction with the æra of Nabonassar, and the corresponding Egyptian one, i. e. the Nabonassarian carried back from the time of Hipparchus or of Ptolemy, would be entirely the same. This period entered our tables æra cyclica 3279, Nab. 20, A. M. 3277 *exeunte,* B. C. 728: nineteen years exactly (one Metonic cycle) after B. C. 747, the epoch of the æra of Nabonassar. The second Apis cycle at Babylon, reckoned from Thoth 1, Nab. 2, B. C. 746, would begin to be current Thoth 1, Nab. 27, B. C. 721: Feb. 19 at sunset or 18 hours, Feb. 20 at midnight.

It is a singular coincidence that the very first Babylonian observation which Hipparchus referred to, and which Ptolemy refers to after him, is the lunar eclipse of March 19, 21 h. 30 m. on the 29th of the first month of the first year of this second cycle, reckoned from noon. The last six years of the first cycle, it is true, came within this period of our Fasti, at the ingress of which the difference of styles, the equable and the Nabonassarian, had first disappeared. Whether any observations were recorded at Babylon during these six years we do not know; but even if they were, their dates in the cycle itself, for the reason just pointed out, would not appear to be consistent with those of the preceding years of the same cycle; though they might have agreed with the Egyptian carried back to those years. At any rate, it is

easily conceivable that, if suspicion attached itself for any reason to the preceding years of this cycle; it would be sufficient to discredit the remainder to the end of the cycle itself.

The fact at least is certain, that Hipparchus and Ptolemy have preserved one observation recorded at Babylon in the very first year of this second cycle, and two recorded in the second; that these are the oldest lunar observations any where on record, of good authority; that they are the first which could have been recorded at Babylon in terms of the Apis cycle, after the difference of styles in the equable notation of noctidiurnal and of annual time had ceased, and there could no longer be any external difference between a given Babylonian and the corresponding Egyptian date: lastly, that neither Hipparchus nor Ptolemy has recorded any other observation of the same kind, and from the same quarter, for less than an hundred years afterwards; the next which Ptolemy has handed down to us bearing date B. C. 621, just 100 years later than the first which he also records, B. C. 721. These are coincidences which it does not seem reasonable to resolve into chance.

## SECTION II.—*Dates of the Magna Compositio.*

There are many dates in the Magna Compositio, all given in the Egyptian style of the calendar, but not all in one and the same æra: generally indeed in the æra of Nabonassar; but sometimes in the æra of Philip; sometimes in the æra of the Chaldees; sometimes in the æra of Dionysius; sometimes in the æra of the Calippic period; sometimes in terms of the canon of Kings; sometimes of the archons of Athens; sometimes of the Roman emperors; sometimes in several of these at once.

It would be an endless task to consider each of these dates in detail: but they naturally distribute themselves into classes, all being records of some astronomical phenomenon or other; ingresses of the sun into the cardinal points; eclipses of the moon; lunar observations under particular circumstances; observations of some one of the five planets known to the ancients. And as there is none among them which astronomy is not able to test and to verify by its

own calculations even at the present day, (and most, if not all, of them have been so verified repeatedly,) they are the more suitable for our purpose; which is the comparison of the equable reckoning of our Fasti with the actual equable reckoning of a given time, from as far back as it may be practicable to begin it, and as low down as it may be possible to bring it.

No such dates indeed have been any where recorded in terms, the antiquity of which is greater than that of the epoch of the æra of Nabonassar. Plutarch in his Life of Romulus has specified Nabonassarian dates by name; which go back 19 or 20 years beyond the Varronian epoch of the Foundation, and consequently 25 or 26 years beyond that of the æra of Nabonassar: and these dates are very important, (as we hope to shew some time or other,) for the illustration of the Roman calendar. But for the object which we have in view at present, we should not be authorized to make any use of them, nor indeed would they be of any use; not being contemporary dates, transmitted from the point of time to which they nominally belong, but obtained by calculation, expressly carried back to that from a much later time.

And though the comparison which we are about to institute is that of the equable style, which we call the cyclical, with that which we call the Nabonassarian; it should be remembered that, though these may differ nominally, they cannot do so in reality; and that the test of their identity perpetually is the Julian date common to both, and the hebdomadal feria common to both also. On this point we have explained ourselves sufficiently already; having shewn at large that between the true equable style in the sense of cyclical, and the true Nabonassarian actually corresponding to it, there was no difference, either at first or ever after, except what was purely nominal and apparent; yet that the cyclical type of the equable reckoning was the standard of reference to the Nabonassarian perpetually, just as the natural type of annual time was to the Julian.

We have nothing therefore to do, except to exhibit these dates collected from the Magna Compositio, and digested under their respective heads: and this we propose to do, i. in their Nabonassarian form and style, in which they are

actually specified by Ptolemy: ii. in the cyclical, to which that was corresponding at the time: iii. in the Julian, answering to both and serving as the index and exponent of both. And though we shall take these Nabonassarian terms in every instance from the Almagest, and the cyclical from our own Fasti; these Julian dates, it will be seen, in every instance identify one with the other: so that any further proof of their agreement is superfluous. Yet, to appreciate the entire force of this proof, it should be remembered that our cyclical terms are all derived from the course and succession of true equable, annual and noctidiurnal, time from the first; Ptolemy's Nabonassarian terms from the course and succession of the same *de facto* at a given time: under which circumstances agreement of styles is agreement both from the first and *de facto* at once.

*Dates of the Magna Compositio digested under their respective heads.*

## I. SOLAR INGRESSES.

### I. Summer Solstices.

I. By Meton and Euctemon at Athens [a].
Apseudes. B. C. 433–432. Nabon. 316.
Period xxix. Difference of epochs — 2.
i. Nab. Phamenoth 21 πρωΐας.
ii. Cyc. Phamenoth 19 πρωΐας.
iii. Julian, June 27 cir. 5 A. M.

II. By Aristarchus of Samos [b].
Cal. Per. i. 50 exeunte. Phil. 44. Nab. 468. B. C. 280.
Period xxxi. Difference of epochs — 4
i. Nab. Pharmuthi 29 [c] at 7h. from sunset.
ii. Cyc. Pharmuthi 25 at 7h. from sunset.
iii. Julian, June 27 cir. 1 A.M.

III. By Hipparchus, at Alexandria [d].
Cal. Per. iii. 43. Nab. 613. B. C. 135.
Period xxxii. Difference of epochs — 5.
i. Nab. Paüni 4 [e] at 19h. from sunset.
ii. Cyc. Pachon 29 at 19h. from sunset.
iii. Julian, June 26 1 P. M.

IV. By Ptolemy, at Alexandria [f].
Phil. 463. Nab. 887. A. D. 140.
Period xxxiv. Difference of epochs — 7.
i. Nab. Mesorē 11 at 14h. from noon.
= Mesorē 12 at 8h. from sunset.
ii. Cyc. Mesore 5 at 8h. from sunset.
iii. Julian, June 25 2 A. M.

### II. Vernal Equinoxes.

I. By Hipparchus, at Alexandria [g].
Cal. Per. iii. 32. Phil. 178. Nab. 602. B.C. 146.
Period xxxi. Difference of epochs — 4.
i. Nab. Mecheir 27, πρωΐας = 11h. from sunset.
ii. Cyc. Mecheir 23, πρωΐας = 11h. from sunset.
iii. Julian, March 24 5 A. M.

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[a] Mag. Comp. lib. iii. cap. ii. 160. Cf. 162, 163.
[b] Lib. iii. cap. ii. 162, 163: cap. iv. 184.
[c] This date is not given in terms by Ptolemy: only the data from which we obtain it.
[d] Lib. iii. cap. ii. 163: iv. 184.
[e] Neither is this date given in terms.
[f] Lib. iii. cap. ii. 162. Cf. iv. 185.
[g] Lib. iii. cap. ii. 154. 157. 161: iv. 184, 185.

II. By Hipparchus, at Alexandria[h].

Cal. Per. iii. 43. Nab. 613. B. C. 135.

Period xxxii. Difference of epochs — 5.

i. Nab. Mecheir 29 at 12h. from noon.

= Mecheir 30 at 6h. from sunset.

ii. Cyc. Mecheir 25 at 6h. from sunset.

iii. Julian, March 24 0 A. M.

III. By Hipparchus, at Alexandria[i].

Cal. Per. iii. 50. Nab. 620. B. C. 128.

Period xxxii. Difference of epochs — 5.

i. Nab. Phamenoth 1 at 6h. from noon.

= Phamenoth 2 at sunset.

ii. Cyc. Mecheir 27 at sunset.

iii. Julian, March 23 6. P. M.

IV. By Ptolemy, at Alexandria[k].

Anton. 3. Phil. 463. Nab. 887. A. D. 140.

Period xxxiv. Difference of epochs — 7.

i. Nab. Pachon 7 at 1h. from noon.

= Pachon 7 at 19h. from sunset.

ii. Cyc. Pharmuthi 30 at 19h. from sunset.

iii. Julian, March 22 1 P. M.

III. Autumnal Equinoxes.

I. By Hipparchus, at Alexandria[l].

Cal. Per. iii. 17. Nab. 586. B. C. 162.

Period xxxi. Difference of epochs — 4.

i. Nab. Mesorē 30 at sunset.

= Epagomene 1 at sunset.

ii. Cyc. Mesore 27 at sunset.

iii. Julian, September 27 6 P. M.

II. By Hipparchus, at Alexandria[m].

Cal. Per. iii. 20. Nab. 589. B. C. 159.

Period xxxi. Difference of epochs — 4.

i. Nab. Epagomene 1 πρωΐας.

ii. Cyc. Mesore 27 πρωΐας.

iii. Julian, September 27 cir. 5 A. M.

III. By Hipparchus, at Alexandria[n].

Cal. Per. iii. 21. Nab. 590. B. C. 158.

Period xxxi. Difference of epochs — 4.

i. Nab. Epagomene 1 at the 6th h. or noon.

ii. Cyc. Mesore 27 at noon.

iii. Julian, September 27 at 0 P. M.

IV. By Hipparchus, at Alexandria[o].

Cal. Per. iii. 32. (33.) Phil. 178 ex. Nab. 602 ex. B. C. 146.

Period xxxi. Difference of epochs — 4.

i. Nab. Epagomene 3 midnight.

= Epagomene 4 at 6h. from sunset.

ii. Cyc. Mesore 30 at 6h. from sunset.

iii. Julian, September 27 0 A. M.

V. By Hipparchus, at Alexandria[p].

Cal. Per. iii. 33. (34) Nab. 603 ex. B. C. 145.

Period xxxi. Difference of epochs — 4.

i. Nab. Epagomene 4 πρωΐας or 12h. from sunset.

ii. Cyc. Mesore 30 πρωΐας or 12h. from sunset.

iii. Julian, September 26 cir. 6 A. M.

VI. By Hipparchus, at Alexandria[q].

Cal. Per. iii. 36. (37.) Nab. 606 ex. B. C. 142.

Period xxxi. Difference of epochs — 4.

i. Nab. Epagomene 4 at sunset.

= Epagomene 5 at sunset.

ii. Cyc. Epagomene 1 at sunset.

iii. Julian, September 26 6 P. M.

VII. By Ptolemy, at Alexandria[r].

Hadrian 17. Nab. 880. A. D. 132.

Period xxxiv. Difference of epochs — 7.

i. Nab. Athyr 7 at 2h. from noon.

= Athyr 7 at 20h. from sunset.

ii. Cyc. Phaophi 30 at 20h. from sunset.

iii. Julian, September 25 2 P. M.

h Mag. Comp. lib. iii. cap. ii. 154. 157. 161 : iv. 184, 185. i Ibid. k Ibid. ii. 161 : iv. 185. l Lib. iii. cap. ii. 153, 154. m Ibid. n Ibid. o Ibid. Cf. 160. p Ibid. q Ibid. r Lib. iii. cap. vi. 203, 204.

VIII. By Ptolemy, at Alexandria[s].
Antonin. 3. Phil. 463. Nab. 887. A.D. 139.
Period xxxiv. Difference of epochs — 7.
i. Nab. Athyr 9 at 13h. from sunset.
ii. Cyc. Athyr 2 at 13h. from sunset.
iii. Julian, September 26 7 A. M.

## II. LUNAR ECLIPSES.

I. By the Chaldeans, at Babylon[t].
Mardoc-Empadi 1. Nab. 27. B. C. 721.
Period xxvii. Difference of epochs ± 0.
i. Nab. Thoth 29 at 9h. 30m. from noon.
= Thoth 30 at 3h. 30m. from sunset.
ii. Cyc. Thoth 30 at 3h. 30m. from sunset.
iii. Julian, March 19 9.30 P. M.
Ideler[u], March 19 9.24 P. M.

II. By the Chaldeans, at Babylon[x].
Mardoc-Empadi 2. Nab. 28. B. C. 720.
Period xxvii. Difference of epochs ± 0.
i. Nab. Thoth 18 at 12h. from noon.
= Thoth 19 at 6h. from sunset.
ii. Cyc. Thoth 19 at 6h. from sunset.
iii. Julian, March 9 0 A. M.
Ideler[y], March 8 11.12 P. M.

iii. By the Chaldeans, at Babylon[z].
Mardoc-Empadi 2. Nab. 28. B. C. 720.
Period xxvii. Difference of epochs ± 0.
i. Nab. Phamenoth 15 at 8h. 30m. from noon.
= Phamenoth 16 at 2h. 30m. fr. sunset.
ii. Cyc. Phamen. 16 at 2h. 30m. from sunset.
iii. Julian, September 1 8.30 P. M.
Ideler[a], September 1 8.22 P. M.

IV. By the Chaldeans, at Babylon[b].
Nabopolassar. 5. Nab. 127. B. C. 621.
Period xxviii. Difference of epochs — 1.
i. Nab. Athyr 27 at 17h. 50m. from noon.
= Athyr 28 at 11h. 50m. from sunset.
ii. Cyc. Athyr 27 at 11h. 50m. from sunset.
iii. Julian, April 22 5.50 A. M.
Ideler[c], April 22 4.46 A.M.

V. By the Chaldeans, at Babylon[d].
Cambysis 7. Nab. 225. B. C. 523.
Period xxix. Difference of epochs — 2.
i. Nab. Phamenoth 17 at 11h. from noon.
= Phamenoth 18 at 5h. from sunset.
ii. Cyc. Phamenoth 16 at 5h. from sunset.
iii. Julian, July 16 11 P. M.
Ideler[e], July 16 11.15. P. M.

VI. By the Chaldeans, at Babylon[f].
Darii 20. Nab. 246. B. C. 502.
Period xxix. Difference of epochs — 2.
i. Nab. Epiphi 28 at 11h. 36m. from noon.
= Epiphi 29 at 5h. 36m. from sunset.
ii. Cyc. Epiphi 27 at 5h. 36m. from sunset.
iii. Julian, November 19 11.36. P. M.
Ideler[g], November 19 11.48 P. M.

VII. By the Chaldeans, at Babylon[h].
Darii 31. Nab. 257. B. C. 491.
Period xxix. Difference of epochs — 2.
i. Nab. Tybi 3 at 11h. 30m. from noon.
= Tybi 4 at 5h. 30m. from sunset.
ii. Cyc. Tybi 2 at 5h. 30m. from sunset.
iii. Julian, April 25 11.30 P. M.
Ideler[i], April 25 10.55 P. M.

VIII. By the Chaldeans, at Babylon[k].
Phanostratus, Nab. 366. B. C. 383.
Period xxx. Difference of epochs — 3.
i. Nab. Thoth 26 at 19h. 20m. from noon.

[s] Mag. Comp. lib. iii. cap. ii. 161: iv. 185. vii. 264: viii. 269: lib. vi. cap. ix. 433.
[t] Lib. iv. cap. v. 244–246. Cf. vi. 262, 263:
[u] Ptolemy, Opp. iv. Mémoire sur les connoissances astronomiques des Chaldéens, p. 171.
[x] Ibid. [y] Lib. cit. p. 172. [z] Ibid.
[a] Lib. cit. p. 173. [b] Mag. Comp. lib. v. cap. xiv. 340. [c] Lib. cit. p. 174. [d] Mag. Comp. lib. v. cap. xiv. 341, 342. [e] Lib. cit. p. 175. [f] Lib. iv. cap. viii. 270, 271. [g] Lib. cit. p. 176. [h] Lib. iv. cap. viii. 267, 268. [i] Lib. cit. p. 177. [k] Lib. iv. cap. x. 275–279.

= Thoth 27 at 13h. 20m. from sunset.
ii. Cyc. Thoth 24 at 13h. 20m. from sunset.
iii. Julian, December 23 7.20 A. M.
Pingré, December 23 8.33 A. M.

IX. By the Chaldeans, at Babylon[l].
Phanostratus, Nab. 366. B. C. 382.
Period xxx. Difference of epochs — 3.
i. Nab. Phamenoth 24 at 9h. 6m. from noon.
= Phamenoth 25 at 3h. 6m. fr. sunset.
ii. Cyc. Pham. 22 at 3h. 6m. from sunset.
iii. Julian, June 18 9.6 P. M.
Pingré, June 18 9.33 P. M.

X. By the Chaldeans, at Babylon[m].
Evander, Nab. 367. B. C. 382.
Period xxx. Difference of epochs — 3.
i. Nab. Thoth 16 at 11h. from noon.
= Thoth 17 at 5h. from sunset.
ii. Cyc. Thoth 14 at 5h. from sunset.
iii. Julian, December 12 11 P. M.
Pingré, December 13 0.18 A. M.

XI. At Alexandria[n].
Cal. Per. ii. 54=Nab. 547 ex. B. C. 201.
Period xxxi. Difference of epochs — 4.
i. Nab. Mesorē 16 at 7h. from noon.
= Mesorē 17 at 1h. from sunset.
ii. Cyc. Mesore 13 at 1h. from sunset.
iii. Julian, September 22 7 P. M.
Pingré, September 22 7.20.10 P. M.

XII. At Alexandria[o].
Cal. Per. ii. 55. (54.) Nab. 548. B. C. 200.
Period xxxi. Difference of epochs — 4.
i. Nab. Mecheir 9 at 13h. 20m. from noon.
= Mecheir 10 at 7h. 20m. fr. sunset.
ii. Cyc. Mecheir 6 at 7h. 20m. from sunset.
iii. Julian, March 20 1.20 A. M.
Pingré, March 20 1.20.10 A. M.

XIII. At Alexandria[p].
Cal. Per. ii. 55. Nab. 548 ex. B. C. 200.
Period xxxi. Difference of epochs — 4.
i. Nab. Mesorē 5 at 14h. 15m. from noon.
= Mesorē 6 at 8h. 15m. from sunset.
ii. Cyc. Mesore 2 at 8h. 15m. from sunset.
iii. Julian, September 12 2.15 A. M.
Pingré, September 12 3.20.10 A. M.

XIV. At Alexandria[q].
Philometor. 7. Nab. 574. B. C. 174.
Period xxxi. Difference of epochs — 4.
i. Nab. Pham. 27 at 14h. 20m. from noon.
= Pham. 28 at 8h. 20m. from sunset.
ii. Cyc. Pham. 24 at 8h. 20m. from sunset.
iii. Julian, May 1 2.20 A. M.
Pingré, May 1 2.35.10 A. M.

XV. At Rhodes[r].
Cal. Per. iii. 37. Nab. 607. B. C. 141.
Period xxxi. Difference of epochs — 4.
i. Nab. Tybi 2 at 10h. 10m. from noon.
= Tybi 3 at 4h. 10m. from sunset.
ii. Cyc. Chœac 29 at 4h. 10m. from sunset.
iii. Julian, January 27 10.10 P. M.
Pingré, January 27 10.43.35 P. M.

XVI. At Alexandria[s]. Cf. No. VII.
Hadrian. 9. Nab. 872. A. D. 125.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pachon 17 at 8h. 24m. from noon.
= Pachon 18 at 2h. 24m. from sunset.
ii. Cyc. Pachon 11 at 2h. 24m. from sunset.
iii. Julian, April 5 8.24 P. M.
Pingré, April 5 8.50.10 P. M.

XVII. At Alexandria[t].
Hadrian. 17. Nab. 880. A. D. 133.
Period xxxiv. Difference of epochs — 7.
i. Nab. Paüni 20 at 11h. 15m. from noon.

l Mag. Comp. lib. iv. cap. x. 275–279. m Ibid. n Ibid. 279–281. o Ibid. p Ibid. 281. q Lib. vi. cap. v. 389: ix. 433. r Lib. vi. cap. v. 390. s Lib. iv. cap. viii. 267, 268. t Lib. iv. cap. v. 254.

= Paüni 21 at 5h. 15m. from sunset.
ii. Cyc. Paüni 14 at 5h. 15m. from sunset.
iii. Julian, May 6 11.15 P. M.
Pingré, May 6 11.5.10 P. M.

XVIII. At Alexandria[u].
Hadrian. 19. Nab. 882. A. D. 134.
Period xxxiv. Difference of epochs — 7.
i. Nab. Chœac 2 at 11h. from noon.
= Chœac 3 at 5h. from sunset.
ii. Cyc. Athyr 26 at 5h. from sunset.
iii. Julian, October 20 11 P. M.
Pingré, October 20 11.20.10 P. M.

XIX. At Alexandria[x].
Hadrian. 20. Nab. 883. A. D. 136.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pharmuthi 19 at 16h. from noon.
= Pharmuthi 20 at 10h. from sunset.
ii. Cyc. Pharmuthi 13 at 10h. from sunset.
iii. Julian March 6 4 A. M.
Pingré, March 6 3.50.10 A. M.

## III. LUNAR OBSERVATIONS.

I. By Timocharis, at Alexandria[y].
Occultation of $\beta$ Scorpii[z] by the moon.
Cal. Per. i. 36. Nab. 454. B. C. 295.
Period xxx. Difference of epochs — 3.
i. Nab. Phaophi 16 at 15h. 24m. from noon.
= Phaophi 17 at 9h. 24m. fr. sunset.
ii. Cyc. Phaophi 14 at 9h. 24m. from sunset.
iii. Julian, December 21 3.24 A. M.

II. By Timocharis, at Alexandria[a].
Conjunction of the moon and Spica Virginis.
Cal. Per. i. 36. Nab. 454. B. C. 294.
Period xxx. Difference of epochs — 3.
i. Nab. Tybi 5 at 8h. from noon.
= Tybi 6 at 2h. from sunset.
ii. Cyc. Tybi 3 at 2h. from sunset.
iii. Julian, March 9 8 P. M.

III. By Timocharis, at Alexandria[b].
Conjunction of the moon and Pleiades.
Cal. Per. i. 47. Nab. 465. B. C. 283.
Period xxx. Difference of epochs — 3.
i. Nab. Athyr 29 at 8h. 40m. from noon.
= Athyr 30 at 2h. 40m. from sunset.
ii. Cyc. Athyr 27 at 2h. 40m. from sunset.
iii. Julian, January 29 8.40 P. M.

IV. By Timocharis, at Alexandria[c].
Conjunction of the moon and Spica Virginis.
Cal. Per. i. 48. Nab. 466. B. C. 283.
Period xxx. Difference of epochs — 3.
i. Nab. Thoth 7 at 15h. 7m. 30s. from noon.
= Thoth 8 at 9h. 7m. 30s. fr. sunset.
ii. Cyc. Thoth 5 at 9h. 7m. 30s. from sunset.
iii. Julian, November 9 3.7.30 A. M.

V. By Hipparchus, at Rhodes[d].
Second Dichotomy, see No. X. XI.
Cal. Per. iii. 52. (51.) Nab. 620. B. C. 128.
Period xxxii. Difference of epochs — 5.
I. Nab. Epiphi 16 at 11h. 30m. from sunset.
ii. Cyc. Epiphi 11 at 11h. 30m. from sunset.
iii. Julian, August 5 5.30 A. M.
The 22d luna.

VI. By Hipparchus, at Rhodes[e].
Philippi 197. Nab. 621. B. C. 127.
Period xxxii. Difference of epochs — 5.
1. i. Nab. Pharmuthi 11 at 12h. 20m. from sunset.
ii. Cyc. Pharm. 6 at 12h. 20m. from sunset.
iii. Julian, May 2 6.20 A. M.

2. i. Nab. Paüni 17 at 4h. from noon.

[u] Mag. Comp. lib. iv. cap. v. 255. Cf. cap. vi. 263. [x] Ibid. 255. [y] Lib. vii. cap. iii. 23. Cf. 26. [z] Proclus says Antares: see Opp. iv. Hypotyposes, p. 114. [a] Lib. vii. cap. iii. 23, 24. [b] Lib. vii. cap. iii. 21. Cf. Opp. iv. Hypotyposes, p. 113, 114. [c] Lib. vii. cap. iii. 24. Cf. 26. [d] Lib. v. cap. iii. 294, 295. Cf. 296. [e] Ibid. cap. v. 299, 300: 304.

= Paüni 17 at 22h. from sunset.
ii. Cyc. Paüni 12 at 22h. from sunset.
iii. Julian, July 7 4 P. M.

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VII. By Agrippa, in Bithynia[f].
Occultation of Pleiades by the moon.
Domitian. 12. Nab. 840. A. D. 92.
Period xxxiii. Difference of epochs — 6.
i. Nab. Tybi 2 at 7h. from noon.
= Tybi 3 at 1h. from sunset.
ii. Cyc. Chœac 27 at 1 h. from sunset.
iii. November 29 7 P. M.

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VIII. By Menelaus, at Rome[g].
Occultation of Spica Virginis by the moon.
Trajan. 1. Nab. 845. A. D. 98.
Period xxxiii. Difference of epochs — 6.
1. i. Nab. Mecheir 15 at 17h. from noon.
= Mecheir 16 at 11h. from sunset.
ii. Cyc. Mecheir 10 at 11h. from sunset.
iii. January 11 5 A. M.

2. Occultation of β Scorpii or of Antares by the moon.
i. Nab. Mecheir 18 at 18h. 30m. from noon.
= Mecheir 19 at 12h. 30m. fr. sunset.
ii. Cyc. Mecheir 13 at 12h. 30m. fr. sunset.
iii. Julian, January 14 6.30 A. M.

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IX. By Ptolemy, at Alexandrla[h].
Culmination of the moon.
Hadrian. 20. Nab. 883. A. D. 135.
Period xxxiv. Difference of epochs — 7.
i. Nab. Athyr 13 at 5h. 50m. from noon.
= Athyr 13 at 23h. 50m. from sunset.
ii. Cyc. Athyr 6, 23h. 50m. from sunset.
iii. Julian, October 1 5.50 P. M. Sunset at Alexandria.

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X. By Ptolemy, at Alexandria[i].
Second Dichotomy, cf. No. V.
Antonin. 2. Nab. 886. A. D. 139.
Period xxxiv. Difference of epochs — 7.
i. Nab. Phamen. 25 at 12h. 45m. fr. sunset.
ii. Cyc. Phamen. 18 at 12h. 45m. fr. sunset.
iii. Julian, February 9 6.45 A. M.
The 23d luna: see the solar eclipse in Pingré, A. D. 139. Jan. 18 8.20.10 A. M. at Alexandria.

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XI. By Ptolemy, at Alexandria[k]. Cf. No. V.
Antonin. 2. Nab. 886. A. D. 139.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pharmuthi 9 at 5h. 30m. from noon.
= Pharmuthi 9 at 23h. 30m. fr. sunset.
ii. Cyc. Pharmuthi 2 at 23h. 30m. fr. sunset.
iii. Julian, February 23 5.30 P. M. Sunset at Alexandria.
On the 8th luna ineunte.

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## IV. PLANETARY OBSERVATIONS.

### I. Mercury.

I. By Dionysius[l]. Cf. No. XIV.
Nab. 484. B. C. 265.
Period xxxi. Difference of epochs — 4.
i. Nab. Thoth 18 at 18h. from noon.
= Thoth 19 at 12h. from sunset.
ii. Cyc. Thoth 15 at 12h. from sunset.
iii. Julian, Nov. 15 6 A. M.

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II. By Dionysius[m].
Nab. 486. B. C. 262.
Period xxxi. Difference of epochs — 4.
i. Nab. Chœac 17 about 17h. from noon.
= Chœac 18 about 11h. from sunset.
ii. Cyc. Chœac 14 about 11h. from sunset.
iii. Julian, February 12 about 5 A. M.

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f Mag. Comp. lib. vii. cap. iii. 22. Cf. Opp. iv. Hypotyposes, p. 104. g Ibid. 25. 27. Cf. Opp. iv. Hypotyposes, p. 114. h Lib. v. cap. xiii. 332. i Ibid. cap. iii. 293, 294. 296. k Lib. vii. cap. ii. 11, 12. l Lib. ix. cap. x. 187: cf. 183. 190: xi. 191. m Ibid. cap. vii. 168.

III. By Dionysius[n].
Nab. 486. B.C. 262.
Period xxxi. Difference of epochs — 4.
i. Nab. Phamenoth 30 about 6h. fr. noon.
= Pharmuthi 1 at sunset.
ii. Cyc. Phamenoth 27 at sunset.
iii. Julian, May 25 about 6 P. M.

IV. By Dionysius[o].
Nab. 486. B.C. 262.
Period xxxi. Difference of epochs — 4.
i. Nab. Paüni 30 at 6h. from noon.
= Epiphi 1 at sunset.
ii. Cyc. Paüni 27 at sunset.
iii. Julian, August 23 about 6 P. M.

V. By Dionysius[p].
Nab. 491. B.C. 257.
Period xxxi. Difference of epochs — 4.
i. Nab. Pharmuthi 5 at 6h. from noon.
= Pharmuthi 6 at sunset.
ii. Cyc. Pharmuthi 2 at sunset.
iii. Julian, May 28 about 6 P. M.

VI. By the Chaldeans[q].
Nab. 564. (corr. 504.) B.C. 245.
Period xxxi. Difference of epochs — 4.
i. Nab. Thoth 27 about 17h. from noon.
= Thoth 28 about 11h. from sunset.
ii. Cyc. Thoth 24 about 11h. from sunset.
iii. Julian, November 19 about 5 A. M.

VII. By the Chaldeans[r].
Nab. 512. B.C. 237.
Period xxxi. Difference of epochs — 4.
i. Nab. Thoth 9 about 17h. from noon.
= Thoth 10 about 11h. from sunset.
ii. Cyc. Thoth 6 about 11h. from sunset.
iii. Julian, October 30 about 5 A. M.

VIII. By Theo[s].
Hadrian. 14. Nab. 877. A.D. 130.
Period xxxiv. Difference of epochs — 7.
i. Nab. Mesorē 18 about 6h. from noon.
= Mesorē 19 about sunset.
ii. Cyc. Mesore 12 about sunset.
iii. Julian, July 4 about 6 P. M.

IX. By Ptolemy[t].
Hadrian. 16. Nab. 879. A.D. 132.
Period xxxiv. Difference of epochs — 7.
i. Nab. Phamenoth 16 at 6h. from noon.
= Phamenoth 17 at sunset.
ii. Cyc. Phamenoth 10 at sunset.
iii. Julian, February 2 about 6 P. M.

X. By Ptolemy[u].
Hadrian. 18. Nab. 881. A.D. 134.
Period xxxiv. Difference of epochs — 7.
i. Nab. Epiphi 18 about 16h. from noon.
= Epiphi 19 about 10h. from sunset.
ii. Cyc. Epiphi 12 about 10h. from sunset.
iii. Julian, June 4 about 4 A. M.

XI. By Ptolemy[x].
Hadrian. 19. Nab. 882. A.D. 134.
Period xxxiv. Difference of epochs — 7.
i. Nab. Athyr 14 about 16h. from noon.
= Athyr 15 about 10h. from sunset.
ii. Cyc. Athyr 8 about 10h. from sunset.
iii. Julian, October 3 about 4 A. M.

XII. By Ptolemy[y].
Hadrian. 19. Nab. 882. A.D. 135.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pachon 19 at 6h. from noon.
= Pachon 20 at sunset.
ii. Cyc. Pachon 13 at sunset.
iii. Julian, April 5 about 6 P. M.

[n] Mag. Comp. lib. ix cap. vii. 169. [o] Ibid. 170. [p] Ibid. 169. [q] Ibid. 171. [r] Ibid. 170. [s] Ibid. cap. ix. 176. [t] Ibid. cap. vii. 166 : viii. 175. [u] Ibid. 167 : viii. 175. [x] Ibid. cap viii. 172. [y] Ibid. 173.

XIII. By Ptolemy[z]. Cf. No. IX.
Antonin. 1. Nab. 885. A. D. 138.
Period xxxiv. Difference of epochs — 7.
i. Nab. Epiphi 20 at 6h. from noon.
= Epiphi 21 at sunset.
ii. Cyc. Epiphi 14 at sunset.
iii. Julian, June 4 about 6 P. M.

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XIV. By Ptolemy[a].
Antonin. 2. Nab. 886. A. D. 139.
Period xxxiv. Difference of epochs — 7.
i. Nab. Epiphi 2 at 7h. 30m. from noon.
= Epiphi 3 at 1h. 30m. from sunset.
ii. Cyc. Paüni 26 at 1h. 30m. from sunset.
iii. Julian, May 17 . 7.30 P. M.

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XV. By Ptolemy[b]. Cf. No. VIII.
Antonin. 2. Nab. 886. A. D. 139.
Period xxxiv. Difference of epochs — 7.
i. Nab. Mesorē 23 about 16h. from noon.
= Mesorē 24 about 10h. from sunset.
ii. Cyc. Mesore 17 about 10h. from sunset.
iii. Julian, July 8 about 4 A. M.

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XVI. By Ptolemy[c].
Antonin. 4. Nab. 888. A. D. 141.
Period xxxiv. Difference of epochs — 7.
i. Nab. Phamenoth 18 about 17h. fr. noon.
= Phamenoth 19 about 11h. fr. sunset.
ii. Cyc. Phamenoth 12 about 11h. fr. sunset.
iii. Julian, February 2 about 5 A. M.

## II. Venus.

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By Timocharis. at Alexandria[d].
Philadelphi 13. Nab. 476. B. C. 272.
Period xxxi. Difference of epochs — 4.
1. i. Nab. Mesorē 17 about 18h. from noon.
= Mesorē 18 about 12h. fr. sunset.
ii. Cyc. Mesore 14 about 12h. fr. suns.
iii. Julian, October 12 about 6 A. M. At the 12th hour of night according to Timocharis.

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2. i. Nab. Mesori 21.
= Mesori 22.
ii. Cyc. Mesore 18.
iii. Julian, October 16.

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II. By Theo[e].
Hadrian. 12. Nab. 875. A. D. 127.
Period xxxiv. Difference of epochs — 7.
i. Nab. Athyr 21 about 18h. from noon.
= Athyr 22 about 12h. from sunset.
ii. Cyc. Athyr 15 about 12h. from sunset.
iii. Julian, October 12 about 6 A. M.

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III. By Theo[f].
Hadrian. 13. Nab. 876. A. D. 129.
Period xxxiv. Difference of epochs — 7.
i. Nab. Epiphi 2 about 17h. from noon.
= Epiphi 3 about 11h. from sunset.
i.. Cyc. Paüni 26 about 11h. from sunset.
iii. Julian, May 20 about 5 A. M.

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IV. By Theo[g].
Hadrian. 16. Nab. 879. A. D. 132.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pharmuthi 21 at 6h. from noon.
= Pharmuthi 22 at sunset.
ii. Cyc. Pharmuthi 15 at sunset.
iii. Julian, March 8 about 6 P. M.

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V. By Ptolemy[h].
Hadrian. 18. Nab. 881. A. D. 134.
Period xxxiv. Difference of epochs — 7.
i. Nab. Pharmuthi 2 about 18h. fr. noon.
= Pharmuthi 3 about 12. fr. sunset.
ii. Cyc. Phamenoth 26 about 12h. fr. sunset.
iii. Julian, February 18 about 6 A. M.

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[z] Mag. Comp. lib. ix. cap. vii. 167 : viii. 175 : cf. lib. x. cap. iv. 205. [a] Lib. ix. cap. x. 183. [b] Ibid. cap. ix. 177. [c] Ibid. cap. vii. 167 : viii. 175. [d] Lib. x. cap. iv. 205 : v. 209. [e] Ibid. cap. i. 195. [f] Ibid. cap. ii. 196. [g] Ibid. cap. i. 194. [h] Ibid. cap. iii. 199.

VI. By Ptolemy[i].

Hadrian. 21. Nab. 884. A. D. 136.

Period xxxiv. Difference of epochs — 7.

i. Nab. Tybi 2 at 6h. from noon.
= Tybi 3 at sunset.
ii. Cyc. Chœac 26 at sunset.
iii. Julian, November 18 about 6 P. M.

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VII. By Ptolemy[k].

Hadrian. 21. Nab. 884. A. D. 136.

Period xxxiv. Difference of epochs — 7.

i. Nab. Mecheir 9 at 6h. from noon.
= Mecheir 10 at sunset.
ii. Cyc. Mecheir 3 at sunset.
iii. Julian, December 25 about 6 P. M.

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VIII. By Ptolemy[l].

Antonin. 2. Nab. 886. A. D. 138.

Period xxxiv. Difference of epochs — 7.

i. Nab. Tybi 29 at 16h. 45m. from noon.
= Tybi 30 at 10h. 45m. from sunset.
ii. Cyc. Tybi 23 at 10h. 45m. from sunset.
iii. Julian, December 16 4.45 A. M.

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IX. By Ptolemy[m].

Antonin. 3. Nab. 887. A. D. 140.

Period xxxiv. Difference of epochs — 7.

i. Nab. Pharmuthi 4 at 6h. from noon.
= Pharmuthi 5 at sunset.
ii. Cyc. Phamenoth 28 at sunset.
iii. Julian, February 18 about 6 P. M.

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X. By Ptolemy[n].

Antonin. 14. Nab. 898. A. D. 150.

Period xxxiv. Difference of epochs — 7.

i. Nab. Thoth 11 about 16h. from noon.
= Thoth 12 about 10h. from sunset.
ii. Cyc. Thoth 5 about 10h. from sunset.
iii. Julian, July 28 about 4 A. M.

## III. Mars.

I. By Dionysius[o].

Phil. 52. Nab. 476. B. C. 272.

Period xxxi. Difference of epochs — 4.

i. Nab. Athyr 20 at 18h. from noon.
= Athyr 21 at 12h. from sunset.
ii. Cyc. Athyr 17 at 12h. from sunset.
iii. Julian, January 18 6 A. M.

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II. By Ptolemy[p].

Hadrian. 15. Nab. 878. A. D. 130.

Period xxxiv. Difference of epochs — 7.

i. Nab. Tybi 26 at 13h. from noon.
= Tybi 27 at 7h. from sunset.
ii. Cyc. Tybi 20 at 7h. from sunset.
iii. Julian, December 15 1 A. M.

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III. By Ptolemy[q].

Hadrian. 19. Nab. 882. A. D. 135.

Period xxxiv. Difference of epochs — 7.

i. Nab. Pharmuthi 6 at 9h. from noon.
= Pharmuthi 7 at 3h. from sunset.
ii. Cyc. Phamenoth 30 at 3h. from sunset.
iii. Julian, February 21 9 P. M.

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IV. By Ptolemy[r].

Antonin. 2. Nab. 886. A. D. 139.

Period xxxiv. Difference of epochs — 7.

i. Nab. Epiphi 12 at 10h. from noon.
= Epiphi 13 at 4h. from sunset.
ii. Cyc. Epiphi 6 at 4h. from sunset.
iii. Julian, May 27 10 P. M.

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V. By Ptolemy[s].

Antonin. 2. Nab. 886. A. D. 139.

Period xxxiv. Difference of epochs — 7.

i. Nab. Epiphi 15 at 9h. from noon.
= Epiphi 16 at 3h. from sunset.
ii. Cyc. Epiphi 9 at 3h. from sunset.
iii. Julian, May 30 9 P. M.

[i] Mag. Comp. lib. x. cap. ii. 197. [k] Ibid. cap. i. 195. [l] Ibid. cap. iv. 201. [m] Ibid. cap. iii. 199. [n] Ib. cap. i. 194. [o] Ib. cap. ix. 236. Cf. vii. 214: ix. 240. [p] Ib. cap. vii. 214. [q] Ibid. [r] Ibid. Cf vii. 232. [s] Ibid. cap. viii. 233: ix. 241.

## IV. Jupiter.

I. By Dionysius[t].

Phil. 83. Nab. 507. B. C. 241.

Period xxxi. Difference of epochs — 4.

i. Nab. Epiphi 17 at 18h. from noon.
= Epiphi 18 at 12h. from sunset.
ii. Cyc. Epiphi 14 at 12h. from sunset.
iii. Julian, September 4 6 A. M.

II. By Ptolemy[u].

Hadrian. 17. Nab. 880. A. D. 133.

Period xxxiv. Difference of epochs — 7.

i. Nab. Epiphi 1 at 11h. from noon.
= Epiphi 2 at 5h. from sunset.
ii. Cyc. Paüni 25 at 5h. from sunset.
iii. Julian, May 17 11 P. M.

III. By Ptolemy[x].

Hadrian. 21. Nab. 884. A. D. 136.

Period xxxiv. Difference of epochs — 7.

i. Nab. Phaophi 13 at 10h. from noon.
= Phaophi 14 at 4h. from sunset.
ii. Cyc. Phaophi 7 at 4h. from sunset.
iii. Julian, August 31 10 P. M.

IV. By Ptolemy[y].

Antonin. 1. Nab. 885. A. D. 137.

Period xxxiv. Difference of epochs — 7.

i. Nab. Athyr 20 at 17h. from noon.
= Athyr 21 at 11h. from sunset.
ii. Cyc. Athyr. 14 at 11h. from sunset.
iii. Julian, October 8 5 A. M.

V. By Ptolemy[z].

Antonin. 2. Nab. 886. A. D. 139.

Period xxxiv. Difference of epochs — 7.

i. Nab. Mesorē 26 at 17h. from noon.
= Mesorē 27 at 11h. from sunset.
ii. Cyc. Mesore 20 at 11h. from sunset.
iii. Julian, July 11 5 A. M.

## V. Saturn.

I. By the Chaldeans[a].

Nab. 519. B. C. 229.

Period xxxi. Difference of epochs — 4.

i. Nab. Tybi 14 at 6h. from noon.
= Tybi 15 at sunset.
ii. Cyc. Tybi 11 at sunset.
iii. Julian, March 1 6 P. M.

II. By Ptolemy[b].

Hadrian. 11. Nab. 874. A. D. 127.

Period xxxiv. Difference of epochs — 7.

i. Nab. Pachon 7 at 6h. from noon.
= Pachon 8 at sunset.
ii. Cyc. Pachon 1 at sunset.
iii. Julian, March 26 6 P. M.

III. By Ptolemy[c].

Hadrian. 17. Nab. 880. A. D. 133.

Period xxxiv. Difference of epochs — 7.

i. Nab. Epiphi 18 at 4h. from noon.
= Epiphi 18 at 22h. from sunset.
ii. Cyc. Epiphi 11 at 22h. from sunset.
iii. Julian, June 3 4 P. M.

IV. By Ptolemy[d].

Hadrian. 20. Nab. 883. A. D. 136.

Period xxxiv. Difference of epochs — 7.

i. Nab. Mesorē 24 at noon.
= Mesorē 24 at 18 h. from sunset.
ii. Cyc. Mesore 17 at 18h. from sunset.
iiii. Julian, July 8 12 P. M. or noon.

V. By Ptolemy[e].

Antonin. 2. Nab. 886. A. D. 138.

Period xxxiv. Difference of epochs — 7.

i. Nab. Mecheir 6 at 8h. from noon.
= Mecheir 7 at 2h. from sunset.
ii. Cyc. Tybi 30 at 2h. from sunset.
iii. Julian, December 22 8 P. M.

t Mag. Comp. lib. xi. cap. iii. 263. 266: iv. 267. Cf. i. 243, 244. u Ibid. cap. i. 243, 244. x Ibid. y Ibid. Cf. cap. i. 259: iii. 263: 266. z Ibid. ii. 259. a Lib. xi. cap. vii. 287, 288. 291: cap. viii. 292. b Ibid. cap. v. 268. c Ibid. d Ibid. Cf. cap. v. 283: vii. 291: vi. 284, 285. e Ibid. cap. vi. 284, 285.

## CHAPTER III.

*Review of dates in terms of the equable Egyptian calendar.*

### SECTION I.—Πομπὴ *or* πανήγυρις *of Ptolemy Philadelphus,* B. C. 280.

ATHENÆUS has given a description of a remarkable *πομπὴ* or *πανήγυρις*, procession or spectacle, celebrated by Ptolemy Philadelphus in honour of Ptolemy Lagi or Soter his father, and of Berenice his mother; both at that time dead[a]. It was taken from Callixenus of Rhodes, author of a work *περὶ Ἀλεξανδρείας*, and on the wonders, (*θαύματα*, miracula,) or curiosities which were to be seen in that city. This same author is also quoted by Athenæus in the description of a vessel with forty banks of oars, built by Ptolemy Philopator, grandson of Philadelphus, the fourth of the Ptolemies who reigned in Egypt[b]: also in the account of another extraordinary vessel; from the close of which it appears he was later than the time of Gabinius and of his contemporary Ptolemy Auletes, surnamed Dionysos Neos, the father of Cleopatra. That is, he did not flourish before B. C. 55 or 54.

The first observation which may be made on the circumstances of this spectacle is that it appears to have taken place *κατὰ μέσον χειμῶνα*. Ἡ *γὰρ Αἴγυπτος*, observed Callixenus[c], *καὶ διὰ τὴν τοῦ περιέχοντος ἀέρος εὐκρασίαν καὶ διὰ τοὺς κηπεύοντας, τὰ σπανίως καὶ καθ' ὥραν ἐνεστηκυῖαν ἐν ἑτέροις φυόμενα τόποις ἄφθονα γεννᾷ καὶ διαπαντός· καὶ οὔτε ῥόδον οὔτε λευκόϊον οὔτ' ἄλλο ῥᾳδίως ἄνθος ἐκλιπεῖν οὐδὲν οὐδέποτ' εἴωθεν*[d]. *διὸ δὴ καὶ κατὰ μέσον χειμῶνα τῆς ὑποδοχῆς τότε γενηθείσης παράδοξος ἡ φαντασία (τότε) τοῖς ξένοις κατέστη.*

The next thing to be remarked is that it took place at the beginning of the year. So at least may it probably be

a v. 25–35.

b v. 37–39. Cf. also Plutarch, Demetrius, xliii. Compare too Anthologia Græca, Archimedes, i. 1–18: Athenæus, v. 40, 44: though that relates to a ship built by Hiero king of Syracuse.

Callixenus and his work are recognized by Harpocration, Ἐγγυθήκη . . . ὡς Καλλίξενός τε ἐν δ' περὶ Ἀλεξανδρείας ὑποσημαίνει. And there are other allusions in Athenæus to the same celebrity: ix. 38: x. 7: xi. 43. 66: (cf. xi. 49.): xv. 20.

c v. 25.

d Cf. Eustathius, ad Odyss. H. 120. i. 267. (=1573.) 10. who quotes these words.

inferred from the following part of the representation[e]: *Μέσος δὲ τούτων ἐβάδιζεν ἀνὴρ μείζων τετράπηχυς, ἐν τραγικῇ διαθέσει καὶ προσώπῳ, φέρων χρυσοῦν Ἀμαλθείας κέρας, ὃς προσηγορεύετο Ἐνιαυτός· ᾧ γυνὴ περικαλλεστάτη κατὰ τὸ μέγεθος εἵπετο, πολλῷ χρυσῷ καὶ διαπρεπεῖ κεκοσμημένη· φέρουσα τῇ μὲν μιᾷ τῶν χειρῶν στέφανον περσαίας, τῇ δ' ἑτέρᾳ ῥάβδον φοίνικος*[f]*· ἐκαλεῖτο δὲ αὕτη Πεντετηρίς. ταύτῃ δ' ἐπηκολούθουν Ὧραι τέσσαρες, διεσκευασμέναι, καὶ ἑκάστη φέρουσα τοὺς ἰδίους καρπούς.*

It may also, in our opinion, be collected from this part of the description in general that the above allusion to the *year* was intended of the natural or solar year; and that the exhibition of which this representation made part was purposely taking place at the beginning of the year. Consequently of the solar year, in the sense of the Egyptian. In confirmation whereof it may also be remarked that, in the whole of the economy of the spectacle from first to last, there appears to have been an intentional reference to the details of the Egyptian calendar, in which all the months consisted of 30 days. The number of persons described as engaged in different parts of the procession, and as doing something or other in their proper place and order in it, were for the most part multiples of the number of days in a corresponding number of months in the Egyptian calendar: 60, 120, 300, 600, and the like. Laying these intimations therefore together we may come to the conclusion that, when this celebrity was going on, the beginning of the Egyptian year was falling *κατὰ μέσον χειμῶνα.*

The next question consequently will be, what is to be understood by the middle of winter? We shall have frequent occasion to illustrate the idiom of antiquity in such allusions as this: from which it will clearly appear that the middle of winter in such a phrase never means what *we* might suppose it to mean, some time between the winter solstice and the vernal equinox; but on the contrary always some time between the autumnal equinox and the winter solstice: the

[e] v. 27.

[f] The branch of the palm was the hieroglyphical symbol of a recurring period of time: a panegyry of any kind of stated occurrence. It is often to be seen on the monuments. Thoth, the personification of number and the scribe of the gods, keeps the account of the years of such celebrities on the notched or serrated leaves of the palm. The Persæa or peach tree too is a monumental tree: and is similarly associated with panegyric times and cycles.

most appropriate designation of which, as a general rule, would be the beginning of November.

The circumstances of the exhibition itself, particularly the flowers displayed in such profusion, were scarcely compatible with a later season in the natural year than this. It is well known indeed that both flowers and fruits, which in other countries were confined to stated seasons in the natural year, might be produced in Egypt almost at all times in the natural year: yet still limits must be assignable to the capabilities of Egypt itself in this respect. It may be questioned whether the assertion, which occurs in the preceding account, that roses and other flowers (the natural production of their proper seasons only elsewhere) were perennial in Egypt, and might be found there at all times in abundance, was strictly true, unless it was intended of such flowers as might be produced at any time in the year by artificial means; and not of the spontaneous productions of the country. Callixenus seems to have meant such, from his allusion to the *κηπεύοντες*,—that is, to the keepers of gardens in Egypt.

Lucan, describing Cleopatra's first entertainment of Julius Cæsar in Egypt, crowns both him and her, among other flowers, with the never-failing rose:

Et nunquam fugiente rosa [g].

on which the Scholiast: Apud Alexandriam semper est rosa. But Theophrastus had been given to understand differently; though it must be admitted that he does not speak from his own observation, but from what he had heard [h]: Ἐν Αἰγύπτῳ γὰρ ...... προτερεῖν δέ φασι τῶν ἐνταῦθα καὶ ῥόδα καὶ ἴα καὶ τὰ ἄλλα ἄνθη καὶ διμήνῳ· καὶ διαμένειν πλείω τῶν παρ' ἡμῖν ἢ οὐκ ἐλάττω χρόνον τούτου: the meaning of which is, that the rose began to bloom two months earlier in Egypt than in Attica, and continued to bloom two months longer; which would be nothing incredible: so that if roses might be found in Greece as late as July or August, they might still be found in Egypt as late as September or October *.

* In our own country, as we all know, the rose is one of the flowers of summer: but in the allusions to it, which occur in the poets or in the

g Pharsalia, x. 165.

h Hist. Pl. vi. cap. viii. § 5.

There is an epigram in Martial, *De Rosis, ad Cæsarem* (i. e. *ad Domitianum*) *missis;* as it appears from Egypt, and

other writers of antiquity, it is almost invariably represented as a production of the spring, and of the early spring too.

In Hesychius[i] ἐαρινὸν is found standing absolutely for the "rose;" as if the *spring flower* κατ' ἐξοχὴν was the rose. Pliny observes of New Carthage in Spain[k]: Carthagine Hispaniæ hieme tota (rosa) præcox: Polybius of Lusitania[l] (or Portugal): Ῥόδα μὲν γὰρ αὐτόθι καὶ λευκόϊα οὐ πλεῖον διαλείπει μηνῶν τριῶν. Chæremon, a poet of the ancient drama who is said to have drawn more of his images and allusions from flowers than from any other department of nature, styled the flowers in general the *children*, but the rose in particular the *nursling*, of spring: Χαιρήμων οὖν, φασὶν, .... κοινῶς μὲν τὰ ἄνθη ἔαρος τέκνα ἐκάλεσεν, ἰδίως δὲ τὰ ῥόδα ὀξυφεγγῆ καὶ ἔαρος τιθηνήματα[m]: the source of which observation was Athenæus[n], who quotes the very words of Chæremon, alluded to by Eustathius. Περὶ δὲ ῥόδων ἐν Ὀδυσσεῖ φησιν οὕτως·

κομαῖσιν ὡρῶν θήματ' εὐάνθη ῥόδα
εἶχον, τιθήνημ' ἔαρος ἐκπρεπέστατον.

καὶ ἐν Θυέστῃ·

ῥόδ' ὀξυφεγγῆ κρίνεσιν ἀργεννοῖς ὁμοῦ.

In the Metamorphoses of Apuleius, Lucius the hero of the story recovers his shape by eating of the buds of the rose, just opening into bloom, on the morning of a day which the context determines to the vernal equinox, and to March 22: and that too at Cenchreæ near Corinth in Greece.

In the epigram, entitled Μῆνες Αἰγυπτίων[o], the rose month even in Egypt, (where it was probably earlier,) is set forth as Pharmuthi; in the Alexandrine calendar, March 27–April 26.

Εἰαρινῶν Φαρμουθὶ ῥόδων πρωτάγγελός ἐστιν.

In that which is entitled Μῆνες Ῥωμαίων[p], it is May. For this says of May,

Μεσσάτιος ῥόδου εἰμὶ καὶ ἀργεννοῖο κρίνοιο,
καὶ ξανθῆς κεράσου βρίθομαι ἀκρεμόσιν.

Procopius mentions an occasion[q], in the 25th of Justinian, A. D. 551[r], when the roses bloomed a second time in the autumn; though their natural season at Constantinople, he tells us, was the spring. According to Chrysostom[s], Easter was the season of roses at Antioch too. The same must have been the case in Judæa also: roses and the spring of the year

[i] p. 1059.
[k] H. N. xxi. 10. p. 25.
[l] Apud Athenæum, viii. 1. Polyb. xxxiv.
[m] Eustathius, ad Odyss. κ. 377. i. 381 = 1658. 50.
[n] xiii. 88.
[o] Anthologia Græca, iii. 211.
[p] Ibid. 219.
[q] De Bello Gothico, iv. 15. 540. 3.
[r] Cf. ibid. 15. 538. 7.
[s] v. 454. C. Sermo xxxiv, De Resurrectione.

as it also appears in the winter[t]: and this must imply that there was something extraordinary in such a present, at such a time of the year, even from Egypt. We may infer too

being associated by the author of Ecclesiasticus[u]: "And as the flower of roses in the spring of the year, as lilies by the rivers of waters, and as the branches of the frankincense tree in the time of summer."

We have collected various allusions of this kind which fell in our way; and as they suggest only the most innocent and pleasing ideas, we are persuaded that our readers will not take it amiss if we lay them before them.

---

*Ῥόδον ὦ φέριστον ἄνθος,*
*ῥόδον ἔαρος μέλημα*[v].

---

*Καλὴ τέχνη τόρευσον*
*ἔαρος κύπελλον ἡδύ·*
*τὰ πρῶτα τερπνὰ ἡμῖν*
*ῥόδα φέρουσαν ὥρην*[x].

---

*Ἴδε πῶς ἔαρος φανέντος*
*Χάριτες ῥόδα βρύουσιν*[y].

---

*Στεφανηφόρου μετ' ἦρος,*
*μέλπομαι ῥόδον θερινόν*[z].

---

*Εἵματα μὲν χροίας τότε οἱ Χάριτές τε καὶ Ὧραι*
*ποίησαν, καὶ ἔβαψαν ἐν ἄνθεσιν εἰαρινοῖσιν,*
*οἷα φοροῦσ' ὧραι, ἔν τε κρόκῳ ἔν θ' ὑακίνθῳ*
*ἔν τε ἴῳ θαλέθοντι ῥόδου τ' ἔνι ἄνθεϊ καλῷ*
*ἡδέϊ νεκταρέῳ*[a].

---

Præterea quur vere rosam frumenta calore
Viteis auctumno fundi sudante videmus,
Si non certa suo quia tempore semina rerum
Cum confluxerunt, patefit quodcumque creatur[b]?

---

Primus vere rosam atque auctumno carpere poma[c].

---

Vernantisque rosæ rubicundo sanguine florem[d].

---

Jam ver purpureum, jam versicoloribus anni
Fœtibus alma parens cingi sua tempora gaudet.
Jam Phrygiæ loti gemmantia lumina promunt,
Et conniventes oculos violaria solvunt.
Oscitat et leo, et ingenuo confusa rubore

t vi. 80.
u Ecclesiasticus, l. 8. Cf. xxiv. 14.
v Anacreon, v. *Εἰς ῥόδον*, ver. 6. Fischeri, Lipsiæ, 1793.
x Ibid. xviii. *Εἰς ποτήριον ἀργυροῦν.*
y Ibid. xxxvii. *Εἰς τὸ ἔαρ*, 1.
z Ibid. liii. *Εἰς ῥόδον.*
a Athenæus, xv. 30. *Κύπρια ἔπη.*
b Lucretius, i. 175.
c Virgil, Georg. iv. 134.
d Manilius, v. 259.

from the point of the epigram at last, that roses, the production of nature in Egypt, must have been intended in this

Virgineas adoperta genas rosa præbet honores
Cœlitibus, templisque Sabæum miscet odorem[e].
* * * *
Nunc ver egelidum nunc est mollissimus annus[f].
* * * *
Jamque Dionæis redimitur floribus hortus,
Jam rosa mitescit Sarrano clarior ostro.
* * * *
Jam rosa distendat contorti stamina junci,
Pressaque flammeola rumpatur fiscina caltha,
Mercibus et vernis dives Vortumnus abundet.

---

Vernæ capiti fluxere rosæ[g].

---

Ocius Archigenem quære, atque eme quod Mithridates
Composuit, si vis aliam decerpere ficum
Atque alias tractare rosas[h].

---

Ver erat et blando mordentia frigora sensu
Spirabat croceo mane revecta dies.
* * * *
Vidi Pæstano gaudere rosaria cultu
Exoriente novo roscida Lucifero.
Rara pruinosis canebat gemma frutetis
Ad primi radios interitura die.
* * * *
Quam modo nascentem rutilus conspexit Eoüs
Hanc rediens sero vespere vidit anum[i].

---

Vidi ego odorati victura rosaria Pæsti
Sub matutino cocta jacere noto[k].

---

*Τόσσος δ' Ἐμπεδοκλῆς φανερώτερος, ὅσσον ἐν ἄλλοις*
*ἄνθεσιν εἰαρινοῖς καλὸν ἔλαμψε ῥόδον*[l].

---

*Ὦ κῶραι τὸ δ' ἔρευθος ἀνέδραμε πρώϊον οἷον*
*ἢ ῥόδον ἢ σίβδας κόκκος ἔχει χροΐαν*[m].

---

*Ὁ δὲ Παγκράτης ἐν τῷ ποιήματι.*(presented to Adrian in Egypt together with a specimen of the *λωτὸς ῥοδίζων*, or lotus grafted on the stock of the rose) *οὐκ ἀγλαφύρως εἴρηκεν·*

*Οὐλὴν ἕρπυλλον λευκὸν κρίνον ἠδ' ὑάκινθον*
*πορφυρέην, λευκοῦ δὲ χελιδονίοιο πέτηλα,*
*καὶ ῥόδον εἰαρινοῖσιν ἀνοιγόμενον ζεφύροισιν·*
*οὔπω γὰρ φύεν ἄνθος ἐπώνυμον Ἀντινόοιο*[n]. Καὶ

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e Columella, x. De Hortorum Cultu, 256. f Ibid. 282–308.
g Seneca Trag. Thyestes, 947.
h Juvenal, xiv. 252. Figs in the autumn, roses in the spring.
i Ausonius, Eidyll. xiv. 361. Rosæ.
k Propertius iv. v. 59.
l Anthologia, i. 230. Rhianus, iii.
m Callimachus, v. In lavacrum Palladis, 27.
n Athenæus, xv. 21.

instance, in opposition to roses as raised by art and culture at Rome.

Ut nova dona tibi Cæsar Nilotica tellus
Miserat hybernas ambitiosa rosas:
Navita derisit Pharios Memphiticus hortos,
Urbis ut intravit limina prima tuæ.
Tantus veris honos—

* * * *

At tu Romanæ jussus jam cedere brumæ
Mitte tuas messes accipe Nile rosas [o].

Yet the question will recur here too, what is to be understood by *winter?* The Roman *Bruma* according to the calendar bore date November 24; the beginning of winter, properly so called, was dated from the cosmical setting of the seven stars; in the calendar of Cæsar, November 11.

*Καὶ ῥόδον ἀγγέλλουσα καὶ ἀνθεμόεσσαν ἐέρσην*
*ἔσσομαι εἰαρινοῖο φίλη ζεφύροιο χελιδών* [p].

*Εἴαρος ἀντέλλοντος ἑώϊος εἰς σὲ βοήσω·*
*ἄνθεα σεῖο τέθηλε· πότε κρίνα καὶ ῥόδα λέξω* [q];

With regard to roses at any other season of the year, especially in winter; such exhibitions were not unexampled; but they were rare, and were not to be made without great trouble and expense. Antony and Cleopatra first met in Cilicia, after the battle of Philippi, about the middle of the autumnal quarter, B. C. 42; i. e. as the ancients usually styled it, the beginning of winter. Athenæus reports from Socrates of Rhodes [r], who wrote an history of the civil war, that Cleopatra gave him there a series of entertainments; in which roses were scattered on the floors a cubit in depth, even when most scarce. Not however without going to prodigious expense: Τῇ *δὲ τετάρτῃ τῶν ἡμερῶν ταλαντιαίους εἰς ῥόδα μισθοὺς δέδωκε· καὶ κατεστρώθη ἐπὶ πηχυαῖα βάθη τὰ ἐδάφη τῶν ἀνδρώνων, ἐμπεπετασμένων δικτύων τοῖς ἕλιξιν.* Something of the same kind is recorded of Antiochus surnamed the Great, B. C. 191; when, instead of prosecuting the war with the Romans, in which he had embarked, as the occasion required, he lost his time; spending the winter at Chalcis in Eubœa in celebrating his marriage with a young woman of Greece [s]: Hic ille positis aureis sericisque tentoriis sub ipso freti murmure, quum inter fluenta tibiis fidibusque concineret, collatis undique quamvis per hyemem rosis . . . virginum puerorumque delectus habebat.

We shall conclude these quotations with the following classical epigram;

[o] Cf. Xenia, lib. xiii. 127: Claudian, De Raptu Proserpinæ, iii. 220–225.

[p] Nonnus, Dionysiaca, ii. 132.

[q] xlii. 293. Cf. Anthologia, i. 32. Meleager, cx: 73. Simonides, lxx. 3.

[r] iv. 29.

[s] Florus, ii. 8. § 9: cf. Livy, xxxvi. 11.

Nor is it likely that a ship would be arriving from Alexandria later than October; the sea being considered by the ancients universally to be shut at the autumnal equinox, or within a month at the utmost after it[u].

That a later time than the end of October, or the beginning of November, could not have been intended by the middle of winter in the present instance, may also be inferred from another part of the description[x]; in which mention occurs of a four-wheeled wagon of gigantic size (20 cubits, 30 feet at least, in length, and 16 cubits, 24 feet at least, in breadth,) drawn by 300 men; on which was a wine-press, 20 cubits long, 15 cubits broad, full of bunches of grapes: and these, persons dressed up as satyrs, and having one in the likeness of Silenus to preside over and direct their movements, were employed in treading, as they went along the way: Ἐπάτουν δὲ ἑξήκοντα Σάτυροι πρὸς αὐλὸν ᾄδοντες μέλος ἐπιλήνιον, ἐφειστήκει δὲ αὐτοῖς Σειληνός· καὶ δι' ὅλης τῆς ὁδοῦ τὸ γλεῦκος ἔρρει.

Egypt was not remarkable for the production of the grape, or for its wines[y], except in particular localities; of which the vicinity of the Lake Mareotis was one, near Alexandria itself. This part of the spectacle then, in which grapes were exhibited in such abundance, ready for the pressing, would seem to be a decisive intimation that the natural season of vintage was not yet over. We are told indeed that the grape ripens in Egypt as early as June 25–July 1[z]; but so it did in Greece, according to Hesiod, as early as July 9 or 10 in his time, the heliacal rising of Orion: and yet vintage time,

the compliment conveyed in which to some beautiful young lady on her birthday will now be better understood:

> Εἴαρος ἠνθοῦμεν τοπρὶν ῥόδα· νῦν δ' ἐνὶ μέσσῳ
> χείματι πορφυρέας ἐσχάσαμεν κάλυκας
> σοὶ ἐπιμειδήσαντα γενεθλίῃ ἄσμενα τῇδε
> ἠοῖ νυμφιδίων ἀσσοτάτῃ λεχέων.
> καλλίστης ὀφθῆναι ἐπὶ κροτάφοισι γυναικὸς
> λώϊον ἢ μίμνειν ἠρινὸν ἠέλιον[a].

u See our Prolegomena ad Harmoniam Evangelicam, cap. iii. p. 168, 169: Dissertations, i. 346: 646: 652: iv. 195–198.

x v. 28: cf. 27. 33. 34 ad fin.

y Cf. Athenæus, i. 60—62: Pliny, H. N. xiv. 9: Diod. Sic. i. 36.

z Sir G. Wilkinson, Manners and Customs, 1st series, ii. v. 151.

a Anthologia, ii. 129: Crinagoras, ix.

properly so called, according to him too, was not earlier than the heliacal rising of Arcturus; about Sept. 19 or 20. Theodore Gaza, in his work De Mensibus, reckons even November (the third month from September) the vintage month in Greece; and determines the site of Pyanepsion, in the ancient Attic calendar, relatively to the natural year, by that coincidence itself. As a general rule, and so far as Egypt could be said to have a vintage season at all, it could not be much different there from what it was in Judæa: and in Judæa it was commonly over by the feast of tabernacles: the limits of which, for the reign of Ptolemy Philadelphus, B. C. 285–247, were September 15 and October 14*.

As another criterion of the time of this exhibition, it may be remarked that it began in the morning and lasted till evening: and we may further collect that, though its close

* The beginning of the *ὀπώρα* in Greece or Italy is commonly designated as the time when the grape began to change color; that is, began to ripen: about a month or something less after the solstice. Pliny[a]: Præcipue solstitio quum thymum et uva florere incipiunt.—Deflorescunt omnia septenis diebus, .... nulla pluribus bis septenis: omnia et intra viii Idus Julii, etesiarum præcursu[b].—Ad ... Canis ortum nigrescente acino .. et quum defloruerit et variante se uva[c]. — In hoc temporis intervallo (between the solstice and the occasus Fidiculæ) res summa vitium agitur, decretorio uvis sidere illo quod Caniculam adpellavimus[d].

*Ἐν δὲ Μινύαις·*

*πολλὴν ὀπώραν Κύπριδος εἰσορᾶν παρῆν,*
*ἄκραισι περκάζουσαν οἰνάνθης χρόαις*[e] (ita leg.)

Philo Judæus[f]: *Ἡ κυνὸς φωνὴ πάντως ὁμώνυμος, ἐμφερομένων πλειόνων ἀνομοίων ἃ δι' αὐτῆς σημαίνεται· τό τε γὰρ χερσαῖον ὑλακτικὸν ζῶον κύων, καὶ θὴρ ὁ θαλάττιος, καὶ ὁ οὐράνιος ἀστὴρ, ὃν ὀπωρινὸν οἱ ποιηταὶ καλοῦσιν, ὃς τῆς ὀπώρας ἄρτι ἡβώσης ἐπιτέλλει, τοῦ τελεσφορῆναί τε χάριν αὐτὴν καὶ πεπανθῆναι.*—Phornutus[g]: *Πρώτη γὰρ ἐκείνη γέννησίς ἐστιν οἴνου ἡ κατὰ πέπανσιν τῆς ὀπώρας, ἥτις γίνεται τῶν καυμάτων ἀκμαζόντων· δευτέρα δ' ἡ κατὰ τὴν πάτησιν, ἐκθλιβομένου τοῖς ποσὶν αὐτοῦ.*

Prosper Alpinus indeed asserts that he had seen grapes in the gardens at Alexandria, nearly ripe, (*probe maturas*,) as early as the 14th of May[h] (old style, 24th of May new style,) that is, about a month before the solstice. The Ὧραι of Aristophanes, quoted by Athenæus, seem to have im-

[a] H. N. xi. 14. p. 253.
[b] xvi. 42: cf. xxi. 31.
[c] xvii. 35. § 17. p. 674.
[d] xviii. 68. § 3. p. 231: cf. 2.
[e] Athenæus, xiii. 88. From Chæremon.
[f] i. 352. 2. De Plantatione Noë.
[g] De Baccho, p. 215.
[h] Res Ægypti, i. iv. ad fin. p. 17.

or conclusion is not said to have coincided with the appearance of the evening star, its beginning was known to have coincided with the first appearance of the morning star[l]: *Ἤγετο γὰρ διὰ τοῦ κατὰ τὴν πόλιν σταδίου. πρώτη δ' ἐβάδιζεν Ἑωσφόρου· καὶ γὰρ ἀρχὴν εἶχεν ἡ πομπὴ καθ' ὃν ὁ προειρημένος ἀστὴρ φαίνεται χρόνον. ἔπειθ' ἡ τοῖς τῶν βασιλέων γονεῦσι κατωνομασμένη· μετὰ δὲ ταύτας αἱ τῶν θεῶν ἁπάντων (εἰκόνες) οἰκείαν ἔχουσαι τῆς περὶ ἕκαστον αὐτῶν ἱστορίας διασκευήν. τὴν δὲ τελευταίαν Ἑσπέρου συνέβαινεν εἶναι, τῆς ὥρας εἰς τοῦτο συναγούσης τὸν καιρόν. τὰ δὲ κατὰ μέρος αὐτῶν εἴ τις εἰδέναι βούλεται τὰς τῶν πεντετηρίδων γραφὰς λαμβάνων ἐπισκοπείτω.*

We may infer from these last words that, as the spectacle lasted till evening, and no doubt was both intended and expected to do so, it naturally concluded with the image of Hesperus, or the evening star; as the appropriate type of evening. But this does not imply that Hesperus was visible at the time in the evening. It is a significant circumstance, with reference to that point, that the allusion to the close of the spectacle is *τῆς ὥρας εἰς τοῦτο*, not *εἰς τοῦτον, συναγούσης τὸν καιρόν*: that is, "evening," but not "the evening star." Now as Venus is almost at all times either a morning or an even-

plied that among other fruits, the production of the *ὀπώρα*, even clusters of grapes in the middle of winter were characteristic of an Egyptian climate.

> *Ὄψει δὲ χειμῶνος μέσου*
> *συκυοὺς βότρυς ὀπώραν . . . .*
> *Αἴγυπτον αὐτῶν τὴν πόλιν*
> *πεποίηκας ἀντ' Ἀθηνῶν*[i].

Again: *Ὅτι δὲ ἐν ταῖς Ἀθήναις διηνεκεῖς ἦσαν αἱ ὀπῶραι πᾶσαι μαρτυρεῖ Ἀριστοφάνης ἐν Ὥραις· τί οὖν παράδοξον ἱστορεῖν δοκεῖ Ἀέθλιος ὁ Σάμιος ἐν πέμπτῳ Σαμίων Ὡρῶν λέγων· Σῦκον καὶ σταφυλὴ καὶ ὁμομηλὶς καὶ μῆλα καὶ ῥόδα δὶς τοῦ ἐνιαυτοῦ ἐγένετο*[k]; But the *ὥρα* or *ὀπώρα* of the Greek calendar was circumscribed by the heliacal rising of Orion, (the second week in July in Aristophanes' time,) and the heliacal rising of Arcturus, with which the *φθινόπωρον* began. The *φθινόπωρον* lasted to the autumnal equinox: after which the *μετόπωρον*, down to the *πλειάδων δύσις*; the time commonly meant by the middle of winter. What Aristophanes then really intended in the above passage may have been merely the plenty and abundance of the *ὀπώρα* at the end of the *μετόπωρον*; the profusion and variety of midsummer at the middle of winter.

i ix. 14. k xiv. 68. l v. 27.

ing star, we must conclude that if it was not an evening star, at this particular time, it must have been a morning star: and that when we find it observed, *ἀρχὴν γὰρ εἶχεν ἡ πομπὴ καθ' ὃν ὁ προειρημένος ἀστὴρ φαίνεται χρόνον,* though this does not appear to be expressed historically, as it might be expected that a circumstance traditionally handed down to that effect would be; yet we may reasonably conjecture that there was an historical foundation even for this observation; and that it was actually recorded of the procession that it began in the morning, and at the time of the appearance of the morning star. Another criterion then of the actual time of the spectacle is that the planet Venus, for the meridian of Alexandria, was a morning star at the time.

It appears also, both from this passage and from that which we quoted supra [m], relating to the symbolical representation of the year, accompanied by the figure which bore the name of Penteteris, that all this was going on at Alexandria in celebration of a quinquennial festival; that is, according to the Greek idiom in such notes of time as that, of a festival of stated recurrence every four years complete. It appears too that the festival was instituted in honour of the parents of the reigning king, (Ptolemy Philadelphus,) Ptolemy Lagi or Soter, the first of the Macedo-Egyptian kings, and Berenice, his queen, the mother of Ptolemy Philadelphus and of Arsinoë his sister and wife [n]; and this appears further from another circumstance of the description [o]: *Ἐστεφανώθησαν δὲ ἐν τῷ ἀγῶνι καὶ στεφάνοις χρυσοῖς εἴκοσι. Πτολεμαῖος δὲ ὁ πρῶτος καὶ Βερενίκη εἰκοσιτρισίν . . . . . ὁ δὲ Φιλάδελφος Πτολεμαῖος, υἱὸς αὐτῶν, κ̀, τ. λ.*

Now we are told by Lucian [p] that Ptolemy Soter abdicated in favour of Philadelphus his son, two years before his own death: *Ζῶν δὲ παρέδωκε τὴν ἀρχὴν πρὸ δυοῖν ἐτοῖν τῆς τελευτῆς τῷ Πτολεμαίῳ τῷ υἱῷ.* And this fact is attested by Porphyry also [q]; from whom too we learn that the beginning of the reign of Philadelphus was reckoned in Egypt accordingly; not from the death of his father, but from the date of this

m p. 420.

n Cf. Theocritus, Idyll. xvi. 107. 110: xvii. 34–70: 128–130, and the Scholia in loc. Berenice however was only the second wife of Ptolemy. The name of his first was Eurydice. Cf. Diogenes Laertius, Demetrius Phalereus, lib. v. cap. v. § viii. 78.

o v. 35.

p Macrobii, 12. Opp. iii. 216. l. 53.

q Apud Eusebium Chron. Arm. Lat. P. i. 237, 238. Cf. Justin. xvi. 2. § 7–9; and the Hermapion of Mr. Ideler Junr., Appendix, xxx. 6.

abdication. To judge from the date of the observation of Venus, recorded in the Magna Compositio after Timocharis in the 13th year of Philadelphus and in Nab. 476[r]; this Egyptian date of his reign must have been Thoth 1 Nab. 464, answering to Nov. 2 B.C. 285; on which principle the date of the death of Ptolemy, his father, two years current or complete afterwards, might be as early as B.C. 284, but could not be later than B.C. 283.

It appears to us that the spectacle described in this instance by Callixenus, and celebrated with so much display and magnificence, was the first occasion of the kind which had yet taken place. And indeed in another reference to it, which occurs in Athenæus, it is actually represented as the first: Ἐν τῇ πρώτῃ ἀχθείσῃ μεγάλῃ πομπῇ ἐν Ἀλεξανδρείᾳ[s]. There might be other occasions of the same kind of celebrity besides this, the accounts of which also might have been transmitted to posterity; but there was none upon record of earlier date than this *.

The question is then, In what year would a Penteteric solemnity of this description, intended to do honour to the memory of Ptolemy Lagi and Berenice, be most probably celebrated? in the year of their death? or four years after their death? It could not be in the year of their death, unless both died in the same year. But it might be both

* Speaking of the Heliochrysos or sunflower, as one of the amarants, (everlasting flowers,) Pliny observes: Qua de causa deos coronant eo: quod diligentissime servavit Ptolemæus rex Ægypti[t]. He means no doubt Ptolemy Philadelphus: and if so, most probably in reference to such occasions as these, on which the images of the gods, with crowns, were carried in procession, and made so conspicuous a figure.

We have not indeed met with any other allusions either to this, or to similar exhibitions of later date in Egypt, and in the reign of Ptolemy Philadelphus, besides this exceedingly graphic and interesting as well as copious and minute description from Callixenus of what we consider the first; for which we are indebted to Athenæus. Yet this would not have been called the *first*; had it not been known that there were others of later date also. Athenæus has preserved an extract from the Arsinoë of Eratosthenes[u], in which a festival, instituted by Ptolemy Philadelphus, was also described. But this was in honour of Bacchus; from which it derived the name of *λαγυνοφόρια*. The *πομπὴ* of Callixenus however is meant in the allusion to the female trumpeter Aglaïs, which also occurs in Athenæus[x].

r See supra, p. 416. s x. 7. t H. N. xxi. 96. u vii. 2. x x. 7.

after the death of Berenice, and four years after that of Ptolemy in particular *. In this case, whether Ptolemy Philadelphus himself was really associated with his father or appointed his father's successor in B. C. 286, or in B. C. 285; the date of the death of the latter might still be B.C. 284: and the first Penteteric, or to speak more correctly, Tetraëteric celebrity of this kind, after his death, might be in course in B. C. 280.

And here the fact which we have collected from the circumstances of the description, viz. that the planet Venus was a morning star, and was actually visible, for the meridian of Alexandria, at the time when the spectacle began, is of much importance to confirm this date; particularly in connection with the other criterion of the time, which has also been ascertained, that of the middle of winter; by the middle of winter the end of October or the beginning of November being understood. For, on this principle, the planet Venus must have been a morning star at the end of October, or at the beginning of November, B.C. 280.

Now it appears from the observation referred to supra [y], that it was made at Alexandria, at the 12th hour of the night; according to Ptolemy at or about 6 A. M. Oct. 12 B. C. 272; which would be only about one quarter of an hour before sunrise. It follows that Venus had not yet attained to its superior conjunction with the sun [z], after which it becomes an evening star, rising after the sun; but was still visible in the morning, before the sun. At this time the sun itself, according to Ptolemy, was in Scorpio; while the planet was in Virgo,

* The classical reader will possibly be reminded, by the above description, of the xvth Idyll of Theocritus, entitled Ἀδωνιάζουσαι; that too containing an account of the celebration of the Adonia at least, on a scale of unusual magnificence, by Arsinoë, the queen of Ptolemy Philadelphus, in honour of her mother Berenice—and of her supposed apotheosis: consequently after her death. This idyll is of great importance to the illustration of the Syrian calendar: and we hope to shew, from the concurrent testimony of several types of that calendar, (of which the Adonia were the distinctive rite,) that the true date of the occasion to which it refers was August 11 and 12, B.C. 282. Now Berenice at that time was only recently dead. We collect then from this fact that she probably survived Ptolemy her husband two years: that the latter died in B.C. 284, and she in B. C. 282.

y p. 430.

z See Ferguson's Astronomy, § 145, page 88.

almost at its greatest elongation from the sun[a]; 42° 53′, according to Ptolemy, west of the sun. Now the mean synodical revolution of the planet Venus from one conjunction with the sun under certain circumstances to the next, and under similar circumstances, is computed by modern astronomers at 583·920 mean solar days[b]. Five of these revolutions = 2919·600 mean solar days. The number of mean solar days in eight mean Julian years = 2922; that is, 2d·400 (2 d. 9 h. 36 sec. of mean solar time) more than five mean synodical revolutions of Venus.

If Venus then was almost at its greatest elongation before the superior conjunction, for the meridian of Alexandria, B. C. 272, October 12 at 6 A. M: it must have been at the same before under similar circumstances, and for the same meridian, according to mean motion at least, B. C. 280 October 9 at 20 h. 24 m. from midnight: i. e. at 8 24 P. M. We apprehend that this is sufficient to satisfy an astronomer that Venus must have been actually a morning star at Alexandria, Nov. 1. B. C. 280; only 22 days later than October 10; and must have been actually visible on the morning of November 1, before sunrise itself *; at the earliest time when a spectacle like this, of such extraordinary duration and so full of variety, would be most likely to begin; viz. as soon as there was daylight enough for the purpose.

Now Nov. 1 B. C. 280 was the Julian date of Thoth 1 Nab. 469. If the spectacle then was actually exhibited on this day, it was actually exhibited on the first day of the Egyptian year: in which case, we cannot doubt that this day must have been selected for it on purpose. It follows that the beginning of the Egyptian year was falling at this time *κατὰ μέσον χειμῶνα* in the idiomatic or ordinary sense of the phrase, understood, viz. of the middle period between the autumnal equinox and the winter solstice; as our tables shew that the primitive year Nab. 469 æra cyc. 3728 also was.

It is observable that there is no mention of the moon or of moonlight in the whole of this account; and there are allusions to lamps or torches, which imply the absence of

* True sunrise for the latitude of Alexandria, Nov. 1. B. C. 280, would take place 6 h. 33 m. 11 sec. A. M. apparent time, 6 h. 20 m. 15 sec. mean time, exclusive of refraction.

[a] Astronomical Tables and Formulæ of the late F. Baily, esq., p. 15: the elongation of Venus varies from 45° to 47° 12′.

[b] Ibid. p. 13.

moonlight: Τῆς δὲ Διονυσιακῆς πομπῆς πρῶτοι μὲν προῄεσαν... τούτοις δ' ἐπηκολούθουν Σάτυροι.... λαμπάδας φέροντες κισσινὰς διαχρυσέας[b]. The new moon of October B.C. 280 would fall October 12, and therefore the full October 26 or 25: and on Nov. 1 the moon would be 20 or 21 days old, and not rising until midnight; long after the close of the show. The first of the Macedo-Egyptian Dius, B. C. 280, bore date October 16 exemtile 3: on the luna 4ª or 5ª not the luna 1ª or 2ª: such being the peculiar rule of that calendar itself, as we hope to explain in due time.

## Section II.—*Third Book of Maccabees.*

The deliverance of the Jews of Egypt from an imminent danger to which they were exposed in the reign of Ptolemy Philopator, son of Ptolemy Euergetes i, and grandson of Ptolemy Philadelphus, is the subject of the third book of Maccabees; which still exists in the Greek, though it has never been admitted, along with the first and second, into the Apocrypha of the English Bible.

It has been objected to the truth of this account that Josephus relates nothing of the same kind; at least in the same part of his history. To which objection it may be replied that, in the part of the history of Josephus which should have contained this account, there are great omissions. No notice is taken in the Antiquities[c], except in the most general terms, of the wars between Antiochus Magnus and this Ptolemy, out of which the events related in the third book of Maccabees ultimately arose; nor of the battle of Rhaphia, an incident of those wars, and an historical occurrence of note, closely connected with the subject of this book of Maccabees. No one then could say whether, if Josephus had related every thing in this part of his history which he might have done and which he was even bound to have done, he would not have related this particular occurrence too.

In part of his work against Apion however, according to the old Latin version[d], (all which remains of that portion at

[b] v. 27: cf. also 28 and 34.

[c] Ant. Jud. xii. iii. 3. The War begins only with the reign of Antiochus Epiphanes.

[d] Lib. ii. 5. p. 1238.

present,) there is mention of an intended destruction of the Jews of Egypt in general, or of those of Alexandria in particular, in the reign of Euergetes ii, Ptolemy Physcon; and of their deliverance from it: the anniversary of which was still kept as an holyday by the Jews of Alexandria in Josephus' time. If this was a second instance of the same kind of danger and of the same kind of preservation from it (as it appears to have been); it renders the former more probable, by removing any ground of objection to it *a priori*. And even if it was the same, merely mistaken by Josephus and related out of its place, or differently in its circumstances; it still serves to prove that the fact of that deliverance had been handed down to his time, and was not unknown to him in general, though he might not be acquainted with all its particulars. We are altogether of opinion however, that the incident referred to in the answer to Apion was a distinct event from the former, and of a later time.

The narrative in the third book of Maccabees begins abruptly: as if it were a fragment, detached from some prior and longer account. So far as concerns the internal evidences of its probability, every thing is in its favour. In the account which it gives of the war between Ptolemy and Antiochus; of the causes to which it was due; of the part taken in it by Theodotus in particular[e]; of the battle of Rhaphia, and of the events which followed even in Palestine, down to the return of Ptolemy to Egypt; it is entirely consistent with Polybius.

We will mention one circumstance only, in illustration of this probability. When the Jews had been assembled at Alexandria, by order of Ptolemy after his return, they were branded, by his orders also, with a particular mark or badge; which this account describes by *παρασήμῳ Διονύσου, κισσοφύλλῳ*[f]. This is an argument of its authenticity. Ptolemy Philopator is notorious in history for his devotion to Dionysos or Bacchus. He bore the same badge himself. Hence the surname of *Διόνυσος* and even of *Γάλλος* applied to him:

e Chap. i. 2. sq. f Chap. ii. 29.

Πτολεμαῖος δὲ ὁ τέταρτος Διόνυσος ἐκαλεῖτο[g]—῾Ο Φιλοπάτωρ Πτολεμαῖος· διὰ τὸ φύλλα κισσοῦ κατεστίχθαι, ὡς οἱ Γάλλοι[h] *.

The war of Antiochus Magnus and of Ptolemy Philopator, *περὶ Κοίλης Συρίας*, is adopted by Polybius as one of the epochs of his general history[i]. He dates its commencement with the overtures made to Antiochus by Theodotus[k]; ending in the betrayal of Tyre, Ptolemais, and of other strongholds of Cœle-Syria to Antiochus by him; to which the third of Maccabees also refers by implication[l], and of which Lucian too supplies some additional particulars[m].

The time of these events it appears[n] was the spring or summer of B. C. 219. Tyre and Ptolemais were betrayed the same year[o]. The rest of it was occupied by Ptolemy in preparations for war, and in negotiations with Antiochus[p],

* It is a further argument of the devotion of this king to Bacchus, that according to Satyrus, (a writer on the *δῆμοι* of Alexandria, quoted by Theophilus ad Autolycum, ii. 7, 8.) he pretended to derive his pedigree from Bacchus. His genealogy was exhibited by Satyrus; beginning with Bacchus or Dionysos, and Althea the daughter of Thestius; and from them carried on through Dejanira *their* daughter, and in the line of the Heraclidæ after her, down to Arsinoë, wife of Lagus the father of Ptolemy Soter the first of the Macedonian kings of Egypt; and from him to this Ptolemy Philopator in the usual way.

For the same reason, of the tribes at Alexandria the *φυλὴ Διονυσία* was constituted by this Ptolemy the first or chief: and most of the *δῆμοι* belonging to this tribe, if not those of the rest of the number too, received new names from him, declaratory of the connection of the royal family with Bacchus; one from Althea, another from Ariadne, a third from Thestius, and so on, including names taken from Thoas, Staphylus, Eunus, Maro; all so many reputed sons of Dionysos: for the explanation of which we refer to the original apud Theophilum, *loco citato*.

g Clemens Alex. Protrepticon, iv. 54: p. 47. 9. The last Ptolemy (Auletes), was surnamed Dionysos too: Lucian, iii. 146: Calumniæ non temere credendum, 16. 4–14: but *Διόνυσος ὁ Νέος*. Cf. Parœmiographi Græci, e Cod. Bodleiano, 907: p. 113 E: *Τὸ βασιλικὸν βοΐδιον. ἐπὶ Πτολεμαίου τοῦ νέου Διονύσου βασιλεύοντος βοῦς ἔτεκεν ἓξ βοΐδια.*

h Etymologicum Magnum, *Γάλλος*.

i Procem. iii. § 1. lib. iii. cap. 1. § 1. lib. iv. cap. 2. § 11.

k Lib. v. cap. 40. § 2, 3: (cf. iv. cap. 37. § 5:) cf. 61. § 3–6: 62. § 2, 3.

l Chap. i. 1, 2.

m Opp. iii. 127. Calumniæ non temere credendum, cap. 2–5. The painter Apelles of Ephesus was denounced to Ptolemy by a rival artist, as privy to the treason of Theodotus; and his life was thereby endangered. Theodotus was governor of Phœnicia at the time, under Ptolemy: 127. 2. 42: and Pelusium, it is said, was seized by his means, 128, 50–52, (which is doubtful,) and Tyre instigated to revolt.

n Polybius, lib. v. 58. § 2—61. § 3.

o Ibid. cap. 61. 4—62. 3.

p Ibid. cap. 62—4—63. 4.

which began with the conclusion of a truce for four months, *συνάπτοντος ἤδη τοῦ χειμῶνος*: consequently towards the end of B. C. 219[q]. These negotiations were afterwards continued a certain length of time: until, it being now evident that an amicable settlement of the contest was impossible, both parties began to prepare in earnest to decide it by the sword. *Συνῆπτε δὲ τὰ τῆς ἐαρινῆς ὥρας*[r]: that is the spring of B. C. 218, the time intimated by Polybius at the beginning of the book[s]. There was a campaign this year[t]: but it led to nothing decisive before both parties went into winter quarters, (Antiochus at Ptolemais.)

Operations were resumed the next year, B. C. 217: *'Αντίοχος καὶ Πτολεμαῖος, τῆς ἐαρινῆς ὥρας ἐνισταμένης, ἑτοίμους ἔχοντες τὰς παρασκευὰς ἐγίγνοντο πρὸς τῷ διὰ μάχης κρίνειν τὴν ἔφοδον*[u]. This was the spring of B. C. 217: the second which had yet been mentioned. It is here that the third of Maccabees falls in with the narrative of Polybius. For the present however we shall still follow the thread of the latter: according to which Ptolemy set out from Alexandria[x], and having remained some time at Pelusium, marched on five days, *παρὰ τὸ Κάσιον καὶ τὰ βάραθρα* (the Serbonian bogs) *διὰ τῆς ἀνύδρου*, until he came within 40 stades of Rhaphia, where he pitched his camp[y]. Antiochus, to meet him, marched first to Gaza; thence to within *ten* stades of Ptolemy, and a few days after (*μετά τινας ἡμέρας*) to within *five*[z]; or half an English mile.

*Egyptian Calendar*, Nab. 531. B. C. 218—*217.

| Months. | Midnight. | | B. C. | Months. | Midnight. | | B. C. |
|---|---|---|---|---|---|---|---|
| i Thoth | October | 17 | 218 | vii Phamenoth | April | 14 | *217 |
| ii Phaophi | November | 16 | — | viii Pharmuthi | May | 14 | — |
| iii Athyr | December | 16 | — | ix Pachon | June | 13 | — |
| iv Chœac | January | 15 | *217 | x Paüni | July | 13 | — |
| v Tybi | February | 14 | — | xi Epiphi | August | 12 | — |
| vi Mecheir | March | 15 | — | xii Mesore | Sept. | 11 | — |

xiii, Epagomenæ, October 11.

q Lib. v. 66. 1, 2: 4—67. 13.
r Ibid. 68. § 1.
s Cap. 1. § 5.
t Ibid. 68. § 1—71. § 12. The eclipse of the moon, Sept. 1. B. C. 218. noticed this year by Polybius, at the end of the military season, (v. 72. § 1—77. § 2: 78. § 1.) places the year out of doubt. Cf. also v. cap. 29. § 7, 8: B.C. 218.
u Lib. v. 79. § 1.
x Ibid. § 2.
y Ibid. 80. § 1-3.
z Ibid. § 4-6.

The season of military operations is much earlier for the climate of Egypt, Cœlesyria, or Judæa than it would be in Europe: and Ptolemy and Antiochus may be supposed without any improbability to have taken the field towards the end of February B. C. 217, and to have been already encamped over against each other before the middle of March. While they were still in this situation, Polybius relates an attempt of Theodotus[a] to surprise Ptolemy in his tent by night: whereby he confirms the third book of Maccabees, which also mentions the same attempt[b], and under the same circumstances; explaining moreover (what Polybius does not explain) how the attempt was frustrated through the precautions of the king's chamberlain, a Jew, called Dositheus; who had caused some one of no note or consequence (*ἄσημόν τινα*, Polybius calls him Andreas, the king's physician) to sleep that night in the king's tent, instead of the king himself.

Polybius however says the attempt was made *ὑπὸ τὴν ἑωθινὴν*, sc. *φυλακήν*; and when it was dark: consequently not on a moonlight night. There was a solar eclipse Feb. 11, 2. 30 P. M. at Paris this year: and therefore a mean new moon, March 12, 3. 14 A. M. Our general lunar calendar shews this moon, March 12 at 18 hours, the 29th of the Egyptian Tybi at 18 hours also. We consider it extremely probable that the attempt of Theodotus was actually made on the morning of March 13.

When the armies had been five days encamped in presence of each other[c], the battle was joined: in the account of which mention occurs of the night after and of the next day[d], but of no more. Ptolemy won the battle[e]: Antiochus escaped from the field first to Rhaphia, afterwards, *ὑπὸ τὴν ἑωθινὴν*, (which also is an argument that there was yet no light until daybreak,) to Gaza. Soon after he returned to Syria: and Ptolemy recovered the cities in Cœlesyria[f] which had been

a Lib. v. 81. § 1–7.
b Ch. i. 2, 3.
c Polyb. v. 82. § 1–85. § 13: 3 Macc. i. 4, 5.
d Polyb. v. 86. § 1, 2: 4–8: 87. § 1.
e Cf. Ælian De Natura Animal. vii. 44: who tells us he would have sacrificed four elephants to the sun, in acknowledgment of his victory; had he not been prevented by a dream.
f Polybius, v. 86. § 7–11.

lost to him through the treachery of Theodotus: and here again the book of Maccabees[g] joins Polybius.

Not long after mention is made in Polybius[h] of proposals of peace from Antiochus; to which Ptolemy readily acceded: and, having concluded a truce for a year, he returned to Egypt, *διατρίψας ἐπὶ τρεῖς μῆνας ἐν τοῖς κατὰ Συρίαν καὶ Φοινίκην τόποις*[i]. The date of all these particulars is finally specified by Polybius along with that of the most important event of the year, (but in a very different quarter of the world,) the victory of Hannibal over the Romans at the Lacus Thrasymenus in Italy[k]: *Ταῦτα δὲ πάντα συνέβη γενέσθαι κατὰ τὸν τρίτον ἐνιαυτὸν τῆς ἑκατοστῆς καὶ τεσσαρακοστῆς Ὀλυμπιάδος,* (B. C. 218-217.) *λέγω δὲ τὴν τῶν Ῥωμαίων περὶ Τυῤῥηνίαν μάχην, καὶ τὴν Ἀντιόχου περὶ Κοίλην Συρίαν, ἔτι δὲ τὰς Ἀχαιῶν καὶ Φιλίππου πρὸς Αἰτωλοὺς διαλύσεις.*

Laying these testimonies together we consider it extremely probable that the battle of Rhaphia was so timed that the three months, spent by Ptolemy in Cœlesyria after it, bore date *circa* Mecheir 1, March 15, B. C. 217: in which case, the armies having been previously five days in sight of each other, they must have met about March 10: and the attempt of Theodotus, made soon after, might actually be made on March 13.

Now a visit of Ptolemy's to Jerusalem after the battle of Rhaphia, (which even Polybius may be said to recognise by implication,) is related in the Book of Maccabees[l]. Simon was high priest at the time[m]: whom we should suppose to be the same, who is mentioned in the Book of Ecclesiasticus[n] and must have been a contemporary of its author, Jesus Siracides. It was this visit which gave occasion to the offence taken by the king at the Jews: for he had conceived a desire of entering the *ναὸς* or holy place of the temple, which they, as their duty was, resisted to the utmost of their power; and when, in spite of their remonstrances, he would have executed his intention by force, it was frustrated at last only in some extraordinary manner[o].

[g] Chap. i. 6.
[h] v. 87. § 1. cf. Justin. xxx. i. § 7.
[i] v. 87. § 3–6.
[k] v. 105. § 3.
[l] ii. 8, 9, 10.
[m] iv. 1.
[n] L. 1.
[o] 3 Macc. i. 10—ii. 24.

On his return to Egypt, partly from shame, partly from vexation, he resolved, according to this book[p], to wreak his resentment on the entire nation of the Jews of Egypt; not merely on those of Alexandria, but throughout the rest of Egypt. For this purpose, he caused them to be collected together at Alexandria; and being collected to be numbered: and while they were undergoing this process, on such as refused to apostatize he commanded the badge of an ivy leaf to be impressed by branding, whereby to devote them to Dionysos: and finally he determined to exterminate them all at once, by exposing them naked and defenceless, in the hippodrome of the city[q], to the fury of his elephants, purposely stimulated with potions of wine and frankincense. And how they were kept in this dangerous situation for three days in succession, yet were preserved from destruction all the time; until at last through a sudden turnin the humour of the king, (which in a person of so changeable a temper as this Ptolemy would be nothing extraordinary, were it not even to be accounted for by a special interposition of Providence in behalf of the Jews,) they were happily relieved; and not only released from their danger, but restored to the king's favour, and publicly entertained by him *seven* days in succession; the account of this forms both the sequel and the conclusion of the narrative[r].

We are concerned only with the Egyptian dates which occur in it; and which are found here in the equable style of the calendar[s]: Ἀπογράφονται δὲ αὐτοὺς ἀπὸ πέμπτης καὶ εἰκάδος τοῦ Παχὼν ἕως τῆς τετάρτης τοῦ Ἐπιφὶ, ἐπὶ ἡμέρας τεσσαράκοντα· συνίστανται δὲ αὐτῶν τὴν ἀπώλειαν ἀπὸ πέμπτης τοῦ Ἐπιφὶ ἕως ἑβδόμης, ἡμέραις τρισίν. The three months, spent in Judæa, being supposed to have been Mecheir, Phamenoth, Pharmuthi, (the last, very probably, only in part,) Ptolemy might be returned to Alexandria by the first of Pachon; between which day and the 25th, it would be very possible to assemble the Jews at Alexandria in such numbers, that the census taken of them might begin on Pachon 25, and go on from that day to Epiphi 4; occupying the whole of the month of Paüni between.

p ii. 25–iii. 1. 12, sqq.

q iv. 11: v. 2. 5. 10. 13, 14. 18. 20. 23. 26. 38. 40. 45, 46: vi. 16. 22, 23. 30.

r ii. 24—vii. 23.

s vi. 38. cf. iv. 15.

The seven days for which they were entertained by the king lasted till the 14th of Epiphi: Εὐωχοῦντο δὲ πάνθ' ὑπὸ τοῦ βασιλέως χορηγούμενοι μέχρι τῆς τεσσαρεσκαιδεκάτης [t]: and since it appears from the context [u] that the *first* of these seven days was also the *last* of the three during which they had been exposed, beginning in the morning; this 14th day of Epiphi must be reckoned exclusively of the seven: and therefore the next seven days, passed by the Jews on their return at Ptolemais surnamed Ῥοδοφόρος [x], cannot be reckoned from an earlier date than Epiphi 14; and in fact are actually to be dated from Epiphi 15 [y].

There is no mention of the sabbath in any part of this account. We may infer therefore that none of the days particularly specified coincided with it. This will appear from the following arrangement of all these circumstances, both in their Egyptian and in their Julian and in their hebdomadal dates; with which we shall conclude.

*Chronology of the* 3d Book of Maccabees, ch. v. 2. *to the end.*

Nab. 531. B. C. *217. Dom. Lett. D. C.

| | |
|---|---|
| Beginning of the numbering at Alexandria. | Pachon 25 or 26.<br>July 7 or 8.<br>Wednesday or Thursday. |
| End of the numbering. | Epiphi 4. Aug. 15. Sunday. |
| First of the three days' exposure, | Epiphi 5. Aug. 16. Monday. |
| Second of the three days' exposure, | — 6. — 17. Tuesday. |
| Third of the three days' exposure, | — 7. — 18. Wednesday. |
| First of the seven days' εὐωχία, | Epiphi 7. Aug. 18. Wednesday. |
| Seventh of the seven days' εὐωχία, | — 13. — 24. Tuesday. |
| Departure of the Jews to their own homes, | Epiphi 14. Aug. 25.<br>Wednesday. |
| Seven days passed at Ptolemais Rosifera, | Epiphi 15—22.<br>August 26 to Sept. 2.<br>Thursday—Thursday. |

t vi. 40.

u v. 45, 46: vi. 16–22–30–36, 37. 40.

x vii. 13–17–19, 20.

y vii. 13–15.

# CHAPTER IV.

## *Review of dates in terms of the equable Egyptian calendar.*

### SECTION I.—i. *Isia of the Egyptians.*

THERE can be no doubt that the principal ceremony of religion in the Egyptian calendar was the Isia. The name of this ceremony has been transmitted to us only through the Greek language; in which it assumed, as usual in such cases, the form of the neuter plural of the adjective Ἴσιος, derived from the substantive Ἶσις: like Ἐλευσίνια, derived from Ἔλευσις and Ἐλευσίνιος, Διονύσια derived from Διόνυσος and Διονύσιος, and the like. Its meaning in Greek is consequently simply τὰ Ἴσιος, *the things of Isis; the things appertaining to Isis*; or at the utmost *the sacred things of Isis, the rites of Isis,* τὰ Ἴσιος ἱερά.

What name was given to this ceremony in the Egyptian language itself, or how these rites of Isis were exprest and characterized by the Egyptians, we do not know. But we *do* know that this was both one of the oldest and one of the most solemn of their observances; and we shall better be able to judge of its importance when the time arrives for those explanations concerning it, which we are obliged to postpone at present; further than merely to observe that its date in the Egyptian calendar was fixed and invariable. It began on the 17th of Athyr, i. e. on the 17th of the third month; and it lasted from that day inclusive to the 20th inclusive, four days in all; and the first three of these four days were of a different character from the fourth; though all four made up only one ceremony, and each of its parts was as essential to the integrity of the whole, in its proper place and order of time, as the other.

Many cases of the celebration of these Egyptian Isia have been left on record in the course of that interval of time through which we are instituting our present review of equable dates; especially towards the latter part of it, or that

part down to which our researches have gradually conducted us. And as the Egyptian date in such cases is known, there cannot be a better criterion of the state of the equable calendar and of its relation to the Julian at a given point of time, than one of these dates of the Isia at that point of time also. We have thrown together some observations on this subject in the note* subjoined; but we shall confine

* It would be premature at the present period of our work to enter on the consideration of the ancient system of polytheism and idolatry, which prevailed so extensively until it was happily superseded by the Christian religion; of the motives or causes into which the first conception of that system is resolvable; of the connection of one form of superstition of this kind with another; of the common principle which pervaded them all; of the time *when*, the locality *where*, and the manner *in which* this common principle was first embodied in a definite form and shape: though these and such questions as these are among the most important which could be proposed; and though these in particular are questions which have never yet been satisfactorily answered; and, above all, though they are closely connected with the calendars of antiquity; so closely that it was always impossible the one should be understood without the knowledge of the other. And as the calendars of antiquity, almost without exception, have hitherto been unknown or very imperfectly understood, it is no wonder that the polytheism or mythology of antiquity has never been understood too, nor has ever been properly cleared up and explained.

We propose at present to confine ourselves exclusively to matters of fact, which cannot be called in question. One of these we apprehend to be the following: That for a long interval of time, after a certain period, Roman history exhibits the spectacle of a singular contest between popular superstition and Roman gravity, constancy, and consistency of character: the former determined to procure the recognition of the worship of Osiris and Isis at Rome, the latter resolved on opposing it, and on refusing its sanction to any thing so objectionable as the Egyptian rites of Osiris and Isis, in their simple Egyptian shape. This contest is seen to have continued 200 years and upwards; often apparently terminated by force and authority on one side, yet renewed directly after by superstition and prejudice on the other. And if it ended at last, (as it certainly did,) in the total surrendry of the point in dispute to the will of the people; the close of the struggle falls in that period of Roman history when every thing was liable to the caprice of arbitrary and tyrannical tempers, (like that of Caius,) free from any restraint but that of superstition itself, or of imbecile and almost idiotic understandings, (like that of Claudius,) notoriously subject to the ascendancy of women or freedmen, the most devoted of all classes of persons to the worship of these foreign divinities. It falls in that period too of the history of the world at which the corruption of morals had reached its height; and when the instincts of human nature were

ourselves in the text to two cases of the kind only; one of which bears on the age of Geminus, (author of the useful and

finding nothing so congenial to their sympathies and inclinations as these impure and effeminate rites; when too an opinion had come into vogue, (inculcated by the philosophers, and at first sight calculated to recommend itself to men's own reason,) that there was after all no difference except in name between one form of religion, one object of worship, one conception of the Deity, and another. Polytheism was only

πολλῶν ὀνομάτων μορφὴ μία.

The same ideal or archetypal principle entered into all its shapes, and made one of all. The first and the oldest expression of this could not differ, except in accidental circumstances, from the last and the latest; but as being the first and original expression of a common idea, it was the most genuine and most authentic; it was the most sacred and venerable. And as the palm of antiquity, the prerogative of prescription, and therefore the privilege of superior holiness, justness, and truth, were universally conceded to the impersonations of this common idea in the theology of Egypt, of Phrygia, of Persia, and of other parts of the East; it is not surprising that the Egyptian Osiris and Isis, the Phrygian Attes and Cybele, the Persian Mithras under his surname of Invictus or Ἀνίκητος, and many others, one after another, gradually found their way into the Roman Capitol; much to the disturbance and almost to the total dispossession of its original owners and occupants, the Capitoline Jupiter, Juno, and Minerva.

With respect to the particular case of Osiris and Isis, and the rest of the Egyptian gods, it is probable that the first encouragement to the idea of the introduction of their worship into Rome was given by the senate itself; when, from motives of policy, or of superstition, or of both, it sanctioned the principle of such an introduction, by bringing Æsculapius to Rome from Epidaurus in B. C. 290; and afterwards the Mater Idæa, or Pessinuntia, from Phrygia in B. C. 205–204. There was little difference except in name between Æsculapius and Osiris; and Æsculapius himself was not an original conception of such a character among the Greeks, but one as we believe borrowed from the East. The true birthplace of Æsculapius was Sidon, in Phœnicia. But this is a point which nearly concerns both the Sidonian and the Tyrian calendar; and therefore we shall enter no further into it at present. The Mater Idæa or Phrygia having been recognised by public authority so early as B. C. 205–204, this act could scarcely fail in its consequences to lead to the introduction of the worship of Osiris and Isis. Between the Mater Idæa, Pessinuntia, or Phrygia, whose proper name was Cybele, and her comate Attes, Attis, or Attin, and Isis and Osiris, there was absolutely no difference except in name. It must have been the height of inconsistency to recognise or to tolerate the former, and yet not to recognise, or to refuse to tolerate, the latter. The common sense of the people was competent to perceive that; and to draw the obvious inference that, if the senate had sanctioned the worship of the

valuable work on astronomy which has come down to posterity,) the other on the date of the reception of this Egyptian

Mater Phrygia, it was bound to permit the worship of Isis: so that, with regard to the origin of the struggle on this point, to which we have alluded, the people were really more consistent than the senate; unless the senate had determined to disavow its own act, and to eject the Mater Idæa from Rome again, after once receiving her there. This indeed they never did, nor probably ever thought of doing; though it is still true that after her first introduction, and her first installation with much ceremony in the Palatium at Rome, they suffered her to fall into a kind of neglect, and her fane or chapel to go to ruins; until her credit was again revived, and the superstition both of the senate and of the people received a fresh impulse in her favour, by means of something which happened in the course of the Bellum Cimbricum and Teutonicum, B. C. 103–102.

This fact of the introduction of the Sacra Phrygia, along with the image from Pessinus, serves equally to illustrate and to authenticate both the irregular Roman calendar and the Phrygian calendar of the time. The contest which began soon after, relative to the reception and recognition of Isis, is probably to be traced up to the example and authority of the precedent thus established. The date of the first instance of the fact is some argument of that connection. L. Æmilius Paullus consul, observes Valerius Maximus [a], cum senatus Isidis et Serapis fana diruenda censuisset, eaque nemo opificum adtingere auderet; posita prætexta securim adripuit templique ejus foribus inflixit.

" None of the workmen durst venture to touch them," or to begin the work of demolition. The reverence of Isis then was already deeply seated in the minds of the common people at Rome: and yet, if the text of Valerius is sound in the reading of L. Æmilius Paullus consul, this incident happened either in his first consulship, B. C. 183–182, or in his second, B. C. 169–168. So early then had Isis and Serapis already their fana at Rome, the work of private devotion, and erected at the cost of particular worshippers; and so early were they already regarded as objects of adoration by the people at large. We are of opinion however that instead of Cos. in the text of Valerius, we ought to read Cens.: and that the true date of this incident in the life of Paullus Æmilius was his censorship, B. C. 164–163. Nothing of the kind is recorded in Livy, whose history does not break off before B. C. 166. It would be the duty of Paullus as censor to denounce to the senate any innovation on the established religion; and to take the lead in suppressing it even by force, if necessary.

And this would explain the allusion to his dress at the time. Polybius [b] indeed gives us to understand that the dress of the censors must have been *purple*, that of the vir consularis fringed with purple, that of the vir triumphalis διάχρυσος, interlaced with gold. Athenæus however observes [c],

[a] i. iii. § 3. [b] Lib. vi. cap. 53. § 7. [c] xiv. 79.

ceremony into the Roman calendar; in other words, of the recognition and deification of Isis and Osiris themselves by public sanction and public authority at Rome.

that the dress even of the censors was only περιπόρφυρος, fringed with purple; which would answer to the description of *prætexta*. In any case, if Paullus was wearing the *toga prætexta* merely as vir consularis; this incident must have happened between either his first consulship, B. C. 183, and his second, B. C. 169—or his second, B. C. 169, and his death, B. C. 161–160; and to adopt even the latest date, B. C. 161—a contest which had begun before B. C. 161, and was not terminated before A. D. 40, lasted 200 years at least.

In the fragments of Lucilius there is an allusion to Serapis, Isis, Harpocrates, (the youngest son of Osiris and Isis [d],) all together:

Sanctu' Serapis,
Isis, et Harpocrates digito qui significat St. [e]

Varro refers to this fragment [f]: Principes dei Cœlum et Terra. hi dei iidem qui in Ægypto Serapis et Isis et St. Harpocrates digito significat. Lucilius' age may be assumed cir. B. C. 129. Varro was living as late as B. C. 39. Servius observes [g]: Varro indignatur Alexandrinos deos Romæ coli: Pliny [h], (who was writing A. D. 75 or 76,) Jam vero etiam Harpocratem, statuasque Ægyptiorum numinum in digitis viri quoque portare incipiunt: so that the women must have been accustomed to do so long before. Such was the difference of estimation in which they were held in the time of Pliny and in that of Paullus Æmilius. Even Cicero, De Divinatione [i], (written B. C. 44,) is found asking: An Æsculapius, an Serapis potest nobis præscribere per somnium curationem valetudinis."

An inscription is extant, which attests the performance of a *Sacrum Isidis* at Rome by public authority, on iv Nonas Januarias U. C. 666; which coincided in that year of the city with Dec. 2, B. C. 89. This inscription is of great importance to the Roman calendar of the time being. We are able to demonstrate that this Roman date of the ceremony was purposely pitched upon, because it coincided with the last day of the Isia, Athyr 20.

Now the performance by authority of an act of religion in honour of a particular divinity, on any day in the calendar, must in all reason look like the consecration by authority also of a particular day and a particular ceremony to the same divinity. The common people looked on this *Sacrum Isidis* in that light: and consequently the object for which the popular superstition is found contending afterwards was the recognition of the 2d January Roman, as the anniversary of the *Sacrum Isidis*: and there is proof that this struggle lasted till the consular year of Gabinius

d Plutarch, De Iside et Osiride, lxv.

e Fragmenta, p. 90. 1. (Dousæ. Lugduni Bat. 1597.) Cf. Festus, xvii. 508. 5, 6. In *Silere*.

f De Lingua Latina, iv. 17. Fragmenta, p. 230. Cf. Augustin, De Civitate Dei, xviii. 5.

g Ad Æneid. viii. 698.

h H. N. xxxiii. 12. p. 50.

i ii. 59. § 123.

## SECTION II.—ii. *Isia in the time of Geminus.*

In the passage, which we quoted from Geminus supra[h], there was an omission. It related to the Isia; and we supply it here[i]:

and Piso, B. C. 58; at which time it was terminated by the resolute conduct of the consul Gabinius himself.

There are cases on record after this of the celebration of the Isia at Rome, and of the suppression of the worship of Isis by authority, B. C. 53, B. C. 48, B. C. 28, B. C. 21 at least: on each of which occasions the time is determined by circumstantial evidence of a critical nature to that of the stated celebration of the Isia according to the proper Egyptian rule; from which fact it is an obvious inference that the people, having been foiled in their attempt to get the *Sacrum Isidis* recognised in the Roman calendar, were nevertheless persevering in their determination to celebrate the Isia according to their own rule.

The last instance of the suppression of the worship of Isis at Rome, which appears in history, so far as we know, is related by Josephus[k]. From the comparison of his account with Tacitus' and Suetonius'[l], its date is seen to have been U. C. 772. A. D. 19. in the reign of Tiberius. No one can say that this suppression was not provoked: yet it failed in eradicating the worship of Isis, or in changing the popular inclination in its favour: and 21 years only from this time, as we shall see by and by, it was publicly recognised, adopted, and sanctioned first by Caius and then by Claudius: and stated days were consigned to the Isia in the Roman calendar itself, taken in the first instance from the Egyptian; which appeared there ever after.

These explanations having been premised, the allusions which are met with in the contemporary poets, even of the reign of Augustus, will be better understood.

1. Quid tua nunc Isis tibi Delia? quid mihi prosunt
   Illa tua toties æra repulsa manu?
Quidve pie dum sacra colis pureque lavari
   Te memini et puro secubuisse toro?
Nunc dea! nunc succurre mihi: nam posse mederi
   Picta docet templis multa tabella tuis.
Ut mea votivas persolvens Delia voces
   Ante sacras lino tecta fores sedeat;
Bisque die resoluta comas tibi dicere laudes
   Insignis turba debeat in Pharia[m].

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Non tibi sunt tristes curæ nec luctus Osiri!
   Sed chorus et cantus et levis aptus amor:

h Page 391.
i Cap. vi. Uranologium 33 E—34 B.
k Ant. Jud. xviii. iii. 4.
l Ibid. xviii. iii. 5. Tac. Ann. ii. 85. (cf. 59. 69. 73. iii. 2.) Suetonius, Tiberius, xxxvi. 1. 2.
m Tibullus, i. iii. 23.

*Δι' ἣν αἰτίαν καὶ τὸ περιφερόμενον ἁμάρτημα*, (error of opinion, prejudice, popular mistake and misapprehension,) *παρὰ τοῖς*

Sed varii flores et frons redimita corymbis,
Fusa sed ad teneros lutea palla pedes:
Et Tyriæ vestes et dulcis tibia cantu,
Et levis occultis conscia cista sacris[n].

ii. Io versa caput primos mugiverat annos:
Nunc dea quæ Nili flumina vacca bibit[o].

Redde etiam excubias divæ nunc ante juvencæ,
Votivas noctes et mihi solve decem[p].

Tertia jam redeunt iterum sollemnia nobis:
Cynthia jam noctes est operata decem.
Atque utinam Nilo pereat quæ sacra tepente
Misit matronis Inachis Ausoniis[q].

iii. Sæpe nega noctes: capitis modo finge dolorem:
Et modo quæ caussas præbeat Isis erit[r].

Isi Parætonium genialiaque arva Canopi
Quæ colis et Memphin palmiferamque Pharon:
Quaque celer Nilus lato delapsus ab alveo
Per septem portus in maris exit aquas:
Per tua sistra precor per Anubidis ora verendi:
Sic tua sacra pius semper Osiris amet:
Pigraque labatur circa donaria serpens,
Et comes in pompam corniger Apis eat:
Huc adhibe vultus[s].

Visite turicremas vaccæ Memphitidos aras,
Visite conspicuis terna theatra locis[t].

Nunc dea linigeræ colitur celeberrima turbæ[u].

To wear linen, (one of the characteristic circumstances alluded to in the above passages,) was distinctive of the worshippers of Isis. It was the proper garb of the Isiaci—so those worshippers were called. In fact, according to Apuleius[w], the use of linen for coverings of any kind was a condition essential to the stated performance of any of the ceremonies of religion in Egypt: Sed enim mundissima lini seges. inter optimas fruges terra

n Ibid. vii. 43.
o Propertius, ii. xxviii. 17.
p Ibid. 61.
q Ibid. xxxiii. 1. Cf. 7–20.
r Ovid, Amores, i. viii. 73.
s Ibid. ii. xiii. 7. Cf. 17, 18.
t Ovid, De Arte Amandi, iii. 393.
u Metamorphos. i. 746. De Io. Cf. 748. Cf. ix. 686. 772, 773. Amores, ii. ii. 25: iii. ix. 33, 34. Ars Amandi, i. 77: iii. 635. De Ponto, i. i. 37: 41–46. 51.
w De Magia, ii. p. 61. ad med. Cf. Herod. ii. 37. Plutarch, De Iside et Osiride, iii. iv.

῞Ελλησιν ἐκ πολλῶν χρόνων παραδοχῆς ἠξιωμένον, μέχρι τῶν καθ' ἡμᾶς χρόνων πεπίστευται· ὑπολαμβάνουσι γὰρ οἱ πλεῖστοι τῶν ῾Ελ-

exorta non modo indutui et amictui sanctissimis Ægyptiorum sacerdotibus, sed opertui quoque in rebus sacris, usurpatur. The dress and costume of the Isiaci is thus represented by Alexander ab Alexandro[x]: Isiaci linea stola amicti sunt, capite raso, calceis papyraceis, sistrum tenentes, aut ramum absinthii marini[y] vel nuces pineas[z], et Anubim supra caput deferentes[z]. These nuces pineæ (nuts, cones, of the pine) were borrowed from the *Sacra Phrygia*. Besides these, they carried a kind of τύποι, figures, suspended from their necks. To shave the head, to wear slippers or pumps of the papyrus, and this linen stole or robe, reaching down to their feet, (the colour of which too, if not always yet at stated times, appears to have been *black*,) and to use a mask representing the head of Anubis, or to wear a cap made in that shape, was most characteristic of them. In the poem ascribed to Cyprian, addressed to some Roman senator and vir consularis, who had once been a Christian, and had afterwards apostatized, to become one of these Isiaci, we read,

Nunc etiam dicis quod te non fecerit ætas
Sed tua relligio calvum, caligaque remota
Gallica sit pedibus molli redimita papyro.
Res miranda satis dejectaque culmine summo:
Si quis ab Isiacis consul procedat in orbem
Cunctis risus erit. quis te non rideat autem
Qui fueris consul nunc Isidis esse ministrum?
Quodque pudet primo[a] nunc non pudet esse secundo[b]?
Ingeniumque tuum turpes damnare per hymnos
Respondente tibi vulgo et lacerante[c] senatu?
Teque domo propria pictum cum fascibus ante
Nunc quoque cum sistro faciem portare caninam?

The interval of ten days, (rather nights, such being the Egyptian rule, nox diem ducebat,) also alluded to, in connection with these services of Isis, appears to have been a stated thing. Ovid would imply that there was a similar rule at the *Sacra Cereris*, or *Thesmophoria*[d]; and though we do not know that the Thesmophoria were ever celebrated ten days, among the Greeks at least, yet the Eleusinia in Ovid's time certainly lasted nine days. But these were not peculiar to the women. Apuleius, who under the feigned name of Lucius in his Metamorphoses really means himself, tells us he was thrice initiated[e]; once in the mysteries of Isis, a second time in those of Serapis, a third in those of Osiris: and each of these ceremonies, by way of preparation, was preceded by ten days' abstinence from wine and animal food. The peculiar length of the period was founded, no

x Lib. ii. 8. p. 320, 321.
y Cf. Pliny. H. N. xxvii. 29.
z Cf. Historiæ Aug. SS. Commodus, 9.
a Consuli sc.
b Viro consulari.
c Lacrymante.
d Metam. x. 431–435.
e Met. xi. 272. 277. 279.

λήνων ἅμα τοῖς Ἰσίοις κατ' Αἰγυπτίους καὶ (also) κατ' Εὔδοξον εἶναι χειμερινὰς τροπάς· ὅπερ ἐστὶ παντάπασι ψεῦδος. μηνὶ γὰρ

doubt, on the division of the equable month into three equal parts: like that of the decads among the Greeks.

It is very important however to observe that the *Sacrum Isidis*, whatsoever it was, performed on the 2d of January Roman, U. C. 666, was so, because of something which happened just on the eve of the first war with Mithridates: which war, following close on the Bellum Sociale, Italicum, or Marsicum, (scarcely over in B. C. 89 or 88 itself,) gave occasion to no little alarm at Rome. It was augured from this incident that Isis was adverse to Mithridates, favourable to the Romans: and the event of the war seemed to confirm the presage.

Sulla, having been appointed consul in B. C. 89–88, was appointed to command in this war also. On his return to Rome B. C. 83, and in one of the years of his dictatorship, (B. C. 80 as it appears from Apuleius[f],) he either founded himself, or permitted others to found, a temple of Isis in the Campus Martius; (the first ever erected to her by authority;) from which she derived the style and title of Campensis, *Regina Campensis*[f]*:* Quæ de templi situ sumto nomine Campensis summa cum veneratione propitiatur: in reference to which too the Scholiast on Juvenal[g]: In Martis campo templum Isidis vetustum. At the same time Sulla incorporated a college of priests or worshippers of Isis[h], under the name of Pastophori[i], governed by Decuriones; one of them chief or master, elected every five years, and from that circumstance called quinquennalis: a college still in existence in the time of Apuleius, A. D. 141; among the Decuriones of which, in contradistinction to simple Pastophori, under his feigned name of Lucius, he supposes himself to be coopted.

In all these disputes, of later date than B. C. 80, often as the Fana of Isis are said to have been demolished, it was never a question whether she should retain this temple *in Campo;* but whether she should possess or retain any other in the city; within the Pomærium at least. The Campus Martius was of course extra Pomærium. In the Descriptio urbis Romæ, it was part of the Regio ix: and both the Iseum and the Serapeum, most properly so called, were there[k].

With regard to the worship of Isis, in any other part of the empire, or any other part of the ancient world distinct from Egypt: she had got admission into Cyrene and Barca before Herodotus' time[l]. The Greeks had a tradition that Io (only another name for Isis) in her wanderings passed through Syria; and that Antioch itself had a more ancient name, Ionia, derived from that circumstance. Libanius however says[m] she was first formally introduced there from Egypt, in the reign of the fourth of the

f Metam. xi. 275.

g vi. 528.

Ut spargat in ædem
Isidis antiquo quæ proxima surgit Ovili.

h Apuleius, Metam. xi. 279 ad fin.

i Ibid. 267. 276.

k Muratorius, MMCXXX.

l Lib. iv. 186. Cf. also Anthologia, i. 216. Callimachus, xviii.

m Ἀντιοχικὸς, xi. i. 308. l. 3. Cf. sundry epigrams in the Anthologia Græca, i. 218. Callimachus, xxv. xxviii: ii. 197. Philippus, x: iii. 36. Lucillius, xxxix.

*ὅλῳ παραλλάσσει τὰ Ἴσια πρὸς τὰς χειμερινὰς τροπάς. ἐρρύη δὲ τὸ ἁμάρτημα ἀπὸ τῆς προειρημένης αἰτίας. πρὸ γὰρ ρκ΄ ἐτῶν συνέπεσε κατ' αὐτὰς τὰς χειμερινὰς τροπὰς ἄγεσθαι τὰ Ἴσια· ἐν ἔτεσι δὲ τέσσαρσι μιᾶς ἡμέρας ἐγένετο παράλλαγμα· τοῦτο οὖν οὐκ αἰσθητὴν ἔσχε παραλλαγὴν πρὸς τὰς κατ' ἔτος ὥρας· ἐν ἔτεσι δὲ μ΄ ἡμερῶν ι΄ ἐγένετο παράλλαγμα· οὐδ' οὕτως αἰσθητὴν εἶναι συμβαίνει τὴν παραλλαγήν. νυνὶ μέντοι γε μηνιαίας γινομένης παραλλαγῆς ἐν ρκ΄ ἔτεσιν, ὑπερβολὴν οὐκ ἀπολείπουσιν ἀγνοίας οἱ διαλαμβάνοντες ἐν τοῖς Ἰσίοις κατ' Αἰγυπτίους καὶ κατ' Εὔδοξον τὰς χειμερινὰς τροπὰς εἶναι.*

It appears from the calendar or parapegma of Geminus itself, subjoined to his work on astronomy, that Eudoxus'

Seleucidæ: *Ἡ γὰρ δὴ Ἶσις, τὸ βούκερων ἄγαλμα, τὸ Αἰγύπτιον, ἀφεῖσα τὴν Μέμφιν δεῦρο μετοικίζεται, κινήσασα μὲν ὀνείρασι Σέλευκον, τὸν ἀπὸ τοῦ Σελεύκου τέταρτον, εἰς τὴν ἑαυτῆς μετάπεμψιν, κινήσασα δὲ Πτολεμαῖον εἰς ἕτοιμον τῆς θεοῦ δόσιν.*

We cannot consider it probable that the Isia were generally received or known among the Greeks in the time of Geminus; because of the misapprehension relating to their proper time and season to which he alludes. The Athenians however reformed their calendar A. D. 127; and then, as we hope to shew in the next Dissertation, they were perfectly familiar with the proper Isiac rule. Apuleius describes the *Isidis Navigium*, at Corinth, A. D. 140[n]; a very characteristic ceremony in honour of her: and Pausanias (A. D. 174) recognises two temples of Isis there in his own time, and two titles of Isis, *Ἶσις Πελαγία*, and *Ἶσις Αἰγυπτία*[o]: besides another temple of her's at Cenchreæ[p]. At Tithorea in Phocis, there was a double *πανήγυρις* in honour of Isis, in his time; one in the autumn, the other in the spring[q]: both which we conjecture to have been of very recent date; the spring one probably in imitation of the autumnal, and this latter probably fixed to that season, and even to September 27 itself, because the Egyptian Isia, seven years before A. D. 174, were actually falling on that day. He recognises the temple of Sarapis at Sparta in particular, as *νεώτατον τοῦτο Σπαρτιάταις ἱερόν*[r]. Yet he notices temples to one or other of these three, Isis, Sarapis, Æsculapius, singly or jointly, at Megara[s], at Phlius[t], in Trœzenia[u], at the isthmus of Trœzene[w], at Bœæ in Laconia[x], at Bura[y], at Hermione[z], at Messene[a], in Ægeira[b], at Œtylus in Laconia[c], at Patræ[d], and at Copæ in Bœotia[e].

[n] Metam. xi. 260—267.
[o] Lib. ii. cap. iv. § 7.
[p] Ibid. ii. § 3. [q] x. xxxii. 9.
[r] iii. xiv. 5.
[s] i. xli. 4, cf. 3.
[t] ii. xiii. 7. [u] xxxii. 6.
[w] xxxiv. 1. [x] iii. xxii. 9.
[y] vii. xxv. 5.
[z] Lib. ii. xxxiv. 10.
[a] iv. xxxii. ad fin.
[b] vii. xxvi. 3.
[c] iii. xxv. 7.
[d] vii. xxi. 6.
[e] ix. xxiv. 2. Cf. also at Cius, on the Pontus: Corpus Inscriptionum Græc. 3724. ii. xvi. 949.

date of the winter solstice was Ægon 4 = December 28. The date of the Isia was Athyr 17; but they lasted till Athyr 20. If Athyr 17 is to fall on December 28, Thoth 1 must fall on October 13: and this was the case Nab. 544–548, B. C. 205–201. If Athyr 20 is to fall on Dec. 28, Thoth 1 must fall on October 10: and that was the case Nabon. 556–560, B. C. 193–189. One of these coincidences would fix the age of Eudoxus to B. C. 205–201; the other to B. C. 193–189. It is certain however that Eudoxus was much older than either of these dates. It could not therefore be intended by Geminus that the Isia had ever fallen on the winter solstice according to Eudoxus, in the time of Eudoxus himself; only, that the winter solstice in his calendar being notoriously attached to December 28, and the Isia having once coincided with that term, an opinion, founded on this coincidence, had got abroad among the Greeks, and was still maintaining its ground even in the time of Geminus, that the date of the winter solstice in the calendar of Eudoxus was also the date of the Egyptian Isia; and *vice versa*, that the date of the Egyptian Isia was his date of the winter solstice. We believe however that there was actually an edition of the ὀκταετηρὶς of Eudoxus, the date of which coincided with the time when the 17th Athyr, the Egyptian date of the Isia, was actually falling on December 28: on which coincidence too the above popular notion among the Greeks was most probably founded. But this is a point which we cannot explain any further at present.

With regard to the age of Geminus himself; he speaks of the Isia as anticipating an entire month, 30 days, as we must suppose, on the winter solstice in his time. If he means by the winter solstice the solstice of Eudoxus, Dec. 28, this would imply that the Isia in his time were falling Nov. 28; and if the 17th Athyr is to fall on Nov. 28, the first of Thoth must fall on September 13: which was the case Nab. 664–668, B. C. 85–81. If the 20th Athyr must fall on Nov. 28, the 1st of Thoth must fall on September 10: and that was the case Nab. 676–680, B. C. 73–69. The earliest date of this treatise of Geminus on this principle would be B. C. 85–81; the latest B. C. 73–69.

But it is not clear to us that he means by the winter sol-

stice the solstice of Eudoxus. He speaks of the solstice absolutely; and the solstice absolutely could not be intended of Eudoxus' solstice, but of the solstice in his own time. Now his own date of the solstice was that of Calippus, Dec. 25; or at least not later than that. A month before that exactly would be Nov. 25. If Athyr 17 is to fall on Nov. 25, Thoth 1 must fall on September 10; and that was the case Nabon. 676–680, B. C. 73–69: if the 20th Athyr is to fall on Nov. 25, the first of Thoth must fall on September 7; and that was the case Nabon. 688–692, B. C. 61–57. Geminus' true age therefore most probably comes between B. C. 69 and 57 *.

[a] With regard to any evidences of his own time supplied by Geminus himself; besides quoting Aristotle and Eudoxus [a], and Dicæarchus [b], and Cleanthes and Crates [c], and Boëthus, a commentator on Aratus [d]; he refers also to Polybius [e], whose time comes down lower than B. C. 146: and to Hipparchus [f], who was still making observations as late as B. C. 129.

It appears from the Scholia on Aristotle, that a Geminus was quoted by Alexander Aphrodisieus, according to Simplicius [g]: Ὁ δὲ Ἀλέξανδρος φιλοπόνως λέξιν τινὰ τοῦ Γεμίνου παρατίθησιν ἐκ τῆς ἐπιτομῆς (τῆς) τῶν Ποσειδωνίου μετεωρολογικῶν ἐξηγήσεως, τὰς ἀφορμὰς παρὰ Ἀριστοτέλους λαβοῦσαν· ἔχει δὲ ὧδε—the original passage no doubt being subjoined, though it does not appear at present in these Scholia [h].

If this Geminus was the author of the work on astronomy, (as it is most probable he was,) this reference to him proves that he was either contemporary with, or lived later than, Posidonius; who was an eminent writer of antiquity; a philosopher of the Stoical school; a native of Apamea in Syria, though better known as a citizen of Rhodes [i], where he appears to have passed most of his life, especially the latter part of it: and it has been commonly supposed Geminus was a Rhodian too. Posidonius was a disciple of Panætius, and seems to have written his life [k]: which might perhaps produce the mistatement in Athenæus [l], that Posidonius accompanied Scipio Africanus the younger on his celebrated mission to the east [m], when he visited Alexandria in the reign of Ptolemy Euer-

[a] Cap. xiv. Uranol. 61, C. D.
[b] xiv. 55, 56.
[c] xiii. 53, A. 54, A.
[d] xiv. 61, C.
[e] xiii. 54, D.
[f] ii. 12, E: 13, C.
[g] 348. 6 b. Physicæ Auscultationis ii. 193. b. 22.
[h] Cf. Fabricius, Bibl. Græc. tom. ii. lib. iii. 5. p. 98. xx.
[i] Suidas in nomine. Cf. Cicero, Tusculanæ, v. 37. § 106, 107. Lucian, Opp. iii. 223. Macrobii, 20.
[k] Cicero, De Officiis, iii. 2. 8. Suidas, in nomine.
[l] xii. 73.
[m] Cicero, De Officiis, i. 26. § 90: ii. 22. § 75: Academica, iv. 2. § 5: Somnium Scip. 2. Valerius Max. iv. iii. 13. Justin. xxxviii. 8. § 8–11.

## SECTION III.—iii. *Reception of the Isia into the Roman calendar.*

A very valuable monument of antiquity is still in existence; which exhibits the Roman correction of the dictator Cæsar exactly as it appears to have stood A. D. 355. The reader may see it in the Uranologium of Petavius [m]. As its date falls within the reign of Constantius, son and successor of Constantine the Great, in our future allusions to it we propose to call it the Constantian calendar.

It appears from this Constantian calendar that the Isia must have been admitted into the Roman calendar before A. D. 355; that they had a stated date in that calendar, v kalendas Novembres, October 28; that they lasted four days,

getes ii. or Physcon; a fact which is true of Panætius, but not of Posidonius.

Lucian tells us [n] he lived to be 84. We can trace his existence down to a point of time, at which, if he was really the disciple of Panætius, he must have been a very old man. Plutarch [o] informs us he saw Marius on his death-bed at Rome, in his seventh consulship, B. C. 87–86. Cicero had often heard him [p]; and Plutarch mentions in his life of Pompey [q], that Pompey returning to his triumph, B. C. 62 and 61, visited him at Rhodes. A letter of Cicero to Atticus is extant [r], written in B. C. 60; from which it appears he had recently written to Cicero from Rhodes, to acknowledge a present of his Ὑπόμνημα in Greek, De Consulatu suo, which Cicero had sent him. In short, he was certainly living later than B. C. 60. According to Suidas, he even visited Rome again ἐπὶ Γαΐου Μαρκέλλου—which, if it is not a mistake for Γαΐου Μαρίου, must be meant of the consul U. C. 705, just at the outbreak of the civil war, B. C. 49. In the Anecdota Parisiensia [s], it might almost be implied that he was living even after the death of Julius Cæsar, B. C. 44.

If Geminus was a young man, or comparatively so, when he wrote his work on astronomy, that might be between B. C. 61 and 57, as we have concluded, in the lifetime of Posidonius: and yet he might survive Posidonius, and abridge his Meteorologica after his death. This appears to us the most probable account of both these works [t].

[m] Page 112.
[n] Macrobii, 20. Opp. iii. 223.
[o] Marius, xlv.
[p] Tusculanæ, ii. 25. § 61. Cf. De Finibus, i. 2. § 6: De Natura Deorum, i. 44. § 123; ii. 34. § 88: De Divinatione, ii. 21. § 47. De Fato, 3–5: at all which times he seems to have been still living.
[q] Pompeius, xlii. Cf. Cicero, Tusculanæ, ii. 25. § 61.
[r] ii. 1. Cf. ad Att. i. 20.
[s] ii. 20, 21.
[t] His mention of Boëthus would be a critical argument of his age; if that was Boëthus of Sidon, whom Strabo also mentions as his own master in the philosophy of Aristotle. Lib. xvi. ii.

from October 28 inclusive to October 31 inclusive, which was in accordance with the Egyptian rule; and one day longer, the kalendæ Novembres, Nov. 1, which was so far a variation from the Egyptian rule. The notice of *Isia* at least is attached to the kalends of November in this Constantian calendar; but with this circumstance of distinction to characterise the Isia of *that* day, (which does not appear in connection with the Isia of any of the four preceding days,) of *ex sen.*, i. e. *ex senatus consulto*: the Isia *ex senatus consulto*, the date of which was Nov. 1.

The first day of the Roman Isia however, in the time of this monument, was clearly October 28. And this may be confirmed by the testimony of the Itinerarium of Claudius Rutilius, the date of which was A. D. 416: for we hope to shew some time or other hereafter, that the Roman Isia were falling on October 28 then too. The last day of the same Roman Isia it seems was Nov. 1: and this also may be confirmed from Joannes Lydus' work De Mensibus, written in the reign of Justinian, soon after A. D. 525: for in that too, imperfect as it is and corrupt even in the fragments thereof which still survive, there is an entry over against iv and iii nonas Novembres, (Nov. 2 and 3) which in the original state of the text was probably attached to Nov. 1: Ἐν τῷ ναῷ τῆς Ἴσιδος συμπέρασμα τῶν ἑορτῶν[u].

The Roman rule of the Isia then partly agreed with the Egyptian, and partly differed from it. It agreed with it in celebrating the Isia four days: it differed from it in keeping them also for a fifth day. It differed from it also in being attached to certain fixed Julian terms; as the Egyptian Isia could not be. The question is, from what quarter could such a ceremony have gained admission into the Roman calendar? and what was the date of its introduction? The first of these questions is easily answered. The principal and most characteristic observance of the Egyptian ritual could be derived to the Roman calendar only from Egypt. The latter may be a little more difficult: yet we hope to be able to answer that too.

The last case of the public suppression of the Isia at

[u] Pag. 113. l. 14. Fragmenta Caseolina, v.

Rome, in the reign of Tiberius[x], is demonstrative that they could not have got admission into the calendar before A. D. 19, the 5th of Tiberius: so that the date of their reception into it, whensoever it took place, must have been considerably later than the Alexandrine correction in B. C. 26. From the time of this correction forwards, there might be double dates even of the same Egyptian observances; one set peculiar to the Alexandrine calendar, the other to the Egyptian; the former fixed, the latter still moveable or cyclical, as they had always been. There can consequently be only two opinions with respect to the Roman date of the Isia. Either it was borrowed from the Alexandrine date of the ceremony, or it was taken from the Egyptian.

Now if the former had been the case; the Roman Isia must have been found attached to November 13, not to October 28: Nov. 13 or Nov. 14 being the stated date of Athyr 17 in the Alexandrine calendar; Nov. 13 in the common years of the cycle of leap year, Nov. 14 in the leap years[y]. But if it was derived from the Egyptian equable calendar, it must have been so when the 17 Athyr, in the natural course of its revolution round the Julian year, was falling on October 28: and this began to be the case Nabon. 788, A. D. 40 in the last year of the emperor Caius or Caligula, and continued to be the case down to Nabon. 792, A.D. 44 in the fourth year of Claudius; but no longer.

The worship of Isis had been suppressed in A. D. 19: but there is no instance on record of any such suppression before, immediately after which it does not appear to have been in existence again, as popular and in as much force as ever. Her images had been dragged through the streets, and thrown into the Tiber; and her temples or fana (within the city at least) had been razed to the ground: yet she had temples, and in the city, their site being in the emporium, when Vitruvius was writing[z]: and he appears to have been living

x See supra, p. 446.

y The Kalendarium Rusticum, (Gruter, cxxxviii. cxxxix.) has the Heuresis, (*finding of Osiris*, the concluding ceremony of the Isia,) in the month of November, after the *Jovis Epulum*, or the Ides, (Nov. 13). Consequently in the latter half of the month. This date was probably taken from the 17th of the Alexandrine Athyr, or at least from the 20th; this last being the proper date of the *εὕρεσις*.

z i. 7. p. 41.

and writing in the reign of Tiberius, as much as in that of Augustus.

We are able to demonstrate that the *Sacra Phrygia*, (the proper characteristic ceremonies of the Phrygian ritual,) were adopted and established at Rome, within these same four years, A. D. 40—44. The proper name of the Roman votaries of Attes and Cybele was *Dendrophori*; that of the worshippers of Osiris and Isis was *Pausarii* and *Pastophori**.

* The reason of this name of Dendrophori applied to the college of priests or worshippers of Attes and Cybele we cannot explain at present. The similar college of priests of Isis, called Pastophori, has been mentioned already supra, p. 449 note. They appear to have been called Pastophori from their practice of carrying images of Isis, Anubis, Harpocrates, and the other Egyptian divinities, in procession through the streets *ἐν παστάσιν, shrines*; which might be transported on the shoulders of men.

Sic numina Memphis
In vulgus proferre solet. penetralibus exit
Effigies, brevis illa quidem, sed plurimus infra
Liniger imposito suspirat vecte sacerdos;
Testatus sudore deum. Nilotica sistris
Ripa sonat, Phariosque modos Ægyptia dicit
Tibia: submissis admugit cornibus Apis.

Claudian, viii. De IV° consulatu Honorii,
A. D. 398. v. 570.

These exodes of the gods or goddesses are of stated occurrence on the monuments of Egypt. Apuleius describes one such from Corinth to the sea, in his own time: Metam. xi. 262, 263: Lucian, (*de Dea Syria*, 48.) mentions a similar procession every year from Hieropolis in Syria to the sea: Opp. iii, 485. These worshippers of Isis were also called *Pausarii*; as some learned men have supposed, from their being accustomed in these processions through the streets to stop at certain places called *Mansiones*: but rather, as we should suppose, from the practice of stopping after a certain number of paces, to break out into some chant or song. *Pausa* is classical in Latin for a *pause* or *stop*: and this act of their's is expressed by *pausas edere*. The Pastophori and Pausarii appear to have both differed from the Isiaci generally. It is not certain whether they did not differ from each other: inscriptions at least occur in the name of the Pausarii, without any mention of the Pastophori[a].

The worship of Isis having been publicly recognised A. D. 40 and 41, we find an inscription in Gruter only *ten* years later. Ti.

[a] Fabretti, vi. p. 488. No. 172. Cf. Reinesius, Cl. i. cxxxix. 170. Morcelli i. 340. cccxxxviiiI.

They constituted two colleges or companies at Rome; and we are entirely of opinion that both were first incorporated and enfranchised by Caius, in the last year of his reign, but were sanctioned and confirmed by Claudius in the first of his.

Ti. Claudio. Cæsare
Aug. Germanico
Sexto. Cornelio. Orfito. Coss
Isidi Invictæ Et Serapi.

that is, A. D. 51. And in Phlegon, De Mirabilibus[b], we read: *Κορνηλίου Γαλλικανοῦ ἡ γυνὴ παιδίον ἔτεκεν κεφαλὴν ἔχον Ἀνούβιδος ἐπὶ Ῥώμης, ἄρχοντος Ἀθήνησιν Δημοστράτου, ὑπατευόντων ἐν Ῥώμῃ Αὔλου Λουκιννίου Νερούα Σιλανιανοῦ καὶ Μάρκου Οὐεστίνου Ἀττικοῦ*: A. D. 65. There are many inscriptions to Isis in Muratorius[c]: and in the Descriptio Urbis Romæ she is often recognised in the different Regiones: as Regio iii[d], Isis et Serapis (meaning temples to them there): Regio v, Isis Patricia: Regio vi[e], templum Salutis et Serapis: Regio xii[f], Isis Athenodoria.

In the account of the fire at Rome, A. D. 80 or 81, the 2d year of Titus, the destruction of the Iseum and the Serapeum is particularly mentioned[g]. These were rebuilt by Domitian[h]. In the reign of Macrinus, or Heliogabalus, A. D. 218, Dio or Xiphilinus[i] observes: *Ἐγεγόνει δὲ τέρατα ἐν τῇ Ῥώμῃ ἄλλα τε καὶ ἐκ τοῦ ἀγάλματος τῆς Ἴσιδος, ὃ ὑπὲρ τὸ ἀέτωμα τοῦ ναοῦ αὐτῆς ἐπὶ κυνὸς ὀχεῖται*,—which last was either an image of Anebo or Anubis, or more probably of the dog-star.

The emperor Otho, like Commodus and Antoninus Caracalla, was addicted to the worship of Isis: Sacra etiam Isidis sæpe in lintea religiosaque veste propalam celebrasse (dicitur)[k]. Adrian affected to despise them: Sacra Romana diligentissime curavit, peregrina contempsit[l]. Alexander Severus, though brought up under Origen, paid respect to Isis and Serapis: Isium et Serapium decenter ornavit, additis signis et deliacis et omnibus mysticis[m]. Tertullian about the same time observes: Nam id plerumque dicendum est: in templo Æsculapii illum habes: in vico Isidis habito: et sacerdos Jovis factus est[n].

We cannot doubt that Isis and the Isiaci were not merely tolerated at Rome, but reverenced as sacred in an eminent sense, when even Domitian in the civil war of Vespasian and Vitellius, and in the storming of the Capitol, A. D. 69, escaped under the disguise of one of this body. Seneca just

[b] Cap. xxiii. 90. Meursii, Lugduni Bat. 1622.
[c] lxx–lxxiv: cxxxix. 1: cxli. 4.
[d] MMCXXVII.
[e] MMCXXVIII.
[f] MMCXXXI.
[g] Dio, lxvi. 24. cf. 26. 21. Suetonius, Titus, viii. 9. Victor, Epitome, Titus. Eusebius, Chron. Arm. Lat. P. ii. 277. ad ann. 2095. Thesaurus Temp. ad ann. 2005. Olymp. 217. I.
[h] Suetonius, Domitianus, v. 1. Eutropius, vii. 15.
[i] lxxix. 10. cf. 8.
[k] Suetonius, Otho, xii. 5.
[l] Historiæ Aug. SS. Spartian, Adrian, 22.
[m] Ibid. Lampridius, Alexander Severus, 26.
[n] De Idololatria, 20: Opp. iv. 177. Cf. De Testimonio Animæ, 2: iv. 32.

On this question too it is a critical coincidence that the relation of the proper Roman calendar to the Julian, from the kalends of January A. D. 40 to the kalends of January A. D. 43 inclusive, was that of *equality:* so that, in any one of these four years, a given Egyptian date agreed both to the same Roman and to the same Julian. But, with the kalends of January A. D. 44, this relation began to be one of inequality; and that coincidence could no longer hold good. The Roman date of the Isia must have been adopted from the Egyptian calendar sometime when the 17th Athyr was agreeing not only to v kalendas Novembris, but also to October 28: therefore in *one* of *these* years, A. D. 40–43. It is about this time, (or only a few years later, in the reign of Nero,) that we find Lucan complaining,

> Nos in templa tuam Romana adcepimus Isin,
> Semideosque canes et sistra jubentia luctus,
> Et quem tu plangens hominem testaris Osirim [r].

And putting such sentiments as the following into the mouth of Pompey the Younger, after the death of his father:

> Evolvam busto jam numen gentibus Isim,
> Et tectum lino spargam per vulgus Osirim,
> Et sacer in Magni cineres mactabitur Apis [s].

Very natural and very consistent; if the deification of Osiris and Isis, of Anubis and Apis, by public authority at least, was still a recent event, to which the old Roman sense of propriety was hardly yet reconciled: but not, if they had been long in established, almost in exclusive, possession of the Pantheon.

It remains to explain if possible the addition of a day to the Isia at Rome, over and above the proper number of days

before, in the reign of Nero, observes, Cum sistrum aliquis concutiens ex imperio mentitur [o]: Juvenal in that of Domitian,

> Pictores quis nescit ab Iside pasci [p]?

and Martial, in one of his epigrams of the same date,

> Nuntiat octavam Phariæ sua turba juvencæ,
> Atque pilata redit jamque subitque cohors [q].

[o] De Vita Beata, xxvii. 1. Opp. I.
[p] xii. 28.
[q] x. 48. 1. cf. xii. 29. 19, 20.
[r] Pharsalia, viii. 831.
[s] Ibid. ix. 157; cf. 145.

devoted to them by the Egyptian rule; and that too *ex senatus consulto.*

Two of the emperors of later time are noted in history as particularly addicted to the worship of Isis. One of these was Commodus. It is related of him [t], "Sacra Isidis coluit ut et caput raderet et Anubin portaret": and it is observed of Pescennius Niger, (Severus' rival for the purple, after the death of Commodus,) "Hunc in Commodianis hortis in porticu curva pictum de musivo (*in mosaic*) inter Commodi amicissimos videmus sacra Isidis ferentem; quibus Commodus adeo deditus fuit ut et caput raderet et Anubin portaret et omnes partes expleret [u]." Commodus therefore might have added a day to the Isia, to shew his devotion to the goddess: and it would have been nothing extraordinary if he had done so. Yet we are not of opinion that the addition in question was actually made by him.

Antoninus Bassianus, surnamed Caracalla, son and successor of Severus, was quite as much devoted to the worship of Isis as Commodus; so much so that Spartian, (his biographer,) had found even the first introduction of her services into Rome attributed to him: "Sacra Isidis Romam deportavit [x], et templa ubique magnifica eidem Deæ fecit: sacra etiam majore reverentia celebravit quam antea celebrabantur [y]"..."In quo quidem, he continues, mihi mirum videtur quemadmodum sacra Isidis primum per hunc Romam venisse dicantur, quum Antoninus Commodus ita ea celebraverit ut et Anubin portaret et pausas ederet. nisi forte iste *addidit celebritati*, non ea primus invenit."

This conjecture of Spartian's is no doubt the true explanation of the phenomenon of which we are in search; a day more in the Roman Isia than in the Egyptian. Antoninus in the excess of his zeal added this day to the Isia, and made them five days long, instead of four; and very probably appointed peculiar services for this fifth day; though what, we cannot undertake to say, because we have nowhere found it on record. And to give greater solemnity to the addition, and to ensure its perpetuity, he caused it to be decreed by

t Lampridius, Commodus, 9.
u Spartianus, Niger, 6.
x Cf. Aurelius Victor, Antoninus Caracalla: Ægypti sacra per eum deportata Romam.
y Vita, 9.

the Roman senate. Hence the intimation which still appears in the Constantian calendar attached to this fifth day, but to no other, of *ex senatus consulto;* and hence the allusion in Lydus to the ceremonies of this last day: to something done on this day in the temple of Isis, which concluded, consummated, and closed her feast, and the holidays devoted to it.

We have it in our power to shew that Antoninus Bassianus, or Caracalla, introduced into the calendar another date, which still appears there under the name of the Navigium Isidis; which at this period of Roman history was a stated ceremony in honour of Isis. It may be questioned however, whether the state of the calendar in the reign of this emperor had not something to do with these proceedings of his. In the second year of his reign, A. D. 212, the Roman days of the month began to be one day behind the Julian: so that the fourth day of the Isia in the Roman calendar, instead of falling October 31, would be falling October 30. This anticipation was very well understood at the time. It might therefore be the moving cause to this addition. A day might purposely be given to the Isia at this time, to bring them up to their proper term, October 31: and this date would ultimately be found attached in the Julian calendar to Nov. 1.

### SECTION IV.—iv. *Date of the Rosetta stone; date of the Marmor Tripolitanum; dates of Pliny; dates of Censorinus.*

We omit in the present review some well known dates: That of the Rosetta stone, which belongs to B. C. 197–196: and that of the Marmor Tripolitanum, A. D. 27 [z]. We shall have occasion to notice them elsewhere. We omit also certain Egyptian dates which occur in the Historia Naturalis of Pliny, familiar probably to some of our readers; because those too will require to be considered on a future occasion. The next such dates, which we propose to notice at present, are those of Censorinus.

"Nam ut a nostris ita ab Ægyptiis quidam anni in litteras relati sunt: ut quos Nabonnazaru nominant, quod a primo imperii ejus anno consurgunt: quorum hic DCCCCLXXXVI. item Philippi: qui ab excessu Alexandri Magni numerantur,

[z] See our Prolegomena, cap. iii. 138, sq.; 152. sqq.

et ad hunc usque producti annos DLXII consummant. sed horum initia semper a primo die mensis ejus sumuntur cui apud Ægyptios nomen est Thoth: quique hoc anno fuit ante diem VII kalendas Julias; cum abhinc annos centum, imperatore Antonino Pio ii. et Bruttio Præsente Coss. (U. C. 892, A. D. 139,) iidem dies fuerint ante diem XII kalendas Augusti [a]."

Censorinus was writing this treatise of his Coss. Ulpio et Pontiano, U. C. 991, A. D. 238 [b]. The Nabonassarian year, answering to that, dated from Thoth 1, was Nab. 986, June 24 at 18 hours, June 25 at midnight, VII kal. Julias Roman; the true cyclical term, to which this Nabonassarian one corresponded, being Mesore 28 at 18 hours, or Mesore 28 at midnight: the standing difference of Thoths after A. D. 225, as we have explained [c] being $\mp 8$.

In like manner Nabon. 887 corresponded to A. D. 139: the first of the Nabonassarian Thoth at that time answering to Mesore 29, and both to July 19 at 18 hours or July 20 at midnight: the latter of which in the Roman style, as the same with the Julian, would be XIII kalendas Augusti, not XII kalendas Augusti, as Censorinus implies the Egyptian date to have been. In consequence of this discrepancy, learned men have suspected an error in his text; and have proposed to correct it by reading XIII kalendas Augusti. We believe his text to be sound; and the actual Roman date of the first of Thoth Nabon. 887, A. D. 139, to have been rightly assigned by him: and yet the Julian date to have been July 20 notwithstanding. How this could be the case it would be premature to explain at present.

It is obvious to remark, that the reduction of these numbers in Censorinus gives the epoch of the æra of Philip in terms of the æra of Nabonassar, Nab. 425 = B. C. 324; which is correct: and the epoch of the æra of Nabonassar itself in terms of the æra vulgaris, B. C. 747.

## Section V.—v. *Dates of Theon.*

Some examples of the equable Egyptian reckoning occur in the *Πρόχειροι κανόνες* of Theon; as well as others in the

[a] De Die Natali, xxi. [b] Ibid. xxi.
[c] Supra, Diss. viii. ch. ii. sect. xii.

Alexandrine [d]. They prove that the old equable calendar had not yet been superseded by the Alexandrine even in his time.

Two of these we propose to adduce: the first, the date of the mean conjunction of the sun and the moon, in the month Phamenoth, *κατ' Αἰγυπτίους*, Diocletiani 90 [e].

The epoch of the æra of Diocletian in the Alexandrine calendar was August 29, A. D. 284; in the equable, Thoth 1, Nab. 1032, Philippi 608, Augusti 314, June 13, A. D. 284 also [f]. Consequently Diocletiani 90 corresponded to Nabon. 1121, reckoned from Thoth 1, May 22 at noon, according to the astronomical rule, A. D. 373.

| A.D. | | | h. | m. | Nab. | | | h. | m. |
|---|---|---|---|---|---|---|---|---|---|
| 373 | May | 22 | 0 | 0 | 1121 | Thoth | 1 | 0 | 0 |
| | add | 180 | | | | add | 180 | | |
| | | 202 | | | | | 181 | | |
| | cast off | 184 | | | | cast off | 180 | | |
| | Nov. | 18 | 0 | 0 | | Phamenoth | 1 | 0 | 0 |
| | | 13 | | | | | 13 | | |
| | December | 1 | 0 | 0 | | Phamenoth | 14 | 0 | 0 |

On which day our Hekkaidekaëteric type of the lunar calendar, period xv. cycle viii. 9, also shews the cyclical new moon.

The second case is that of two eclipses, one of the sun, Thoth 24 at 2 h. 24 m. P. M. *ἔγγιστα* in the Egyptian calendar; Paüni 22 at 2 h. 24 m. P. M. in the Alexandrine: the other, of the moon, Phamenoth 6, 17 h. 12 m. from noon, in the equable calendar; both however Diocletiani 80 [g] = Nabon. 1111—1112: Philippi 687—688: A. D. 363—364.

| i. A. D. | | | h. | m. | Nab. | | | h. | m. | |
|---|---|---|---|---|---|---|---|---|---|---|
| 364 | May | 24 | 0 | 0 | 1112 | Thoth | 1 | 0 | 0 | |
| | | 23 | 2 | 24 | | | 23 | 2 | 24 | |
| | June | 16 | 2 | 24 | | Thoth | 24 | 2 | 24 | |
| | | | | | | | 23 | 20 | 24 | from sunset. |

| | | h. | m. | | |
|---|---|---|---|---|---|
| According to Pingré, ☉ eclipsed at Paris, A. D. 364 | June 16, | 1 | 0 | | P. M. |
| | | + 1 | 50 | 10 | |
| at Alexandria, | June 16, | 2 | 50 | 10 | |

[d] Ptolemæi Opera, vi. Πρόχειροι κανόνες.

[e] Ibid. p. 74.

[f] Ibid. vi. 31, 32.

[g] Opp. vi. p. 71. 84—87. cf. 81, 82.

[h]

| A. D. | | | h. | m. | Nab. | | | h. | m. |
|---|---|---|---|---|---|---|---|---|---|
| 364 | May | 24 | 0 | 0 | 1112 | Thoth | 1 | 0 | 0 |
| | | 185 | 17 | 12 | | | 185 | 17 | 12 |
| | | 209 | 17 | 12 | | | 186 | 17 | 12 |
| | cast off | 184 | | | | cast off | 180 | | |
| | November | 25 | 17 | 12 | | Phamenoth | 6 | 17 | 12 |
| | = | 26 | 5 | 12 from sunset | | = | 7 | 11 | 12 from sunset. |

| | h. | m. | s. | |
|---|---|---|---|---|
| According to Pingré, ☽ ecl. at Paris, November 26, A.D. 364 | 2 | 0 | 0 | A. M. |
| | +1 | 50 | 10 | |
| at Alexandria, Nov. 26, | 3 | 50 | 10 | A. M. |

## Section VI.—vi. *Isia in the time of Achilles Tatius.*

*Ποτὲ δὲ Αἰγύπτιοι ἀπὸ Καρκίνου ἐπὶ Αἰγοκέρωτα τὸν ἥλιον κατιόντα ὁρῶντες καὶ ἐκ μακροτέρων σμικρύνοντα τὰς ἡμέρας ἐπένθουν· εὐλαβούμενοι μὴ κατὰ βραχὺ καταλίπῃ αὐτοὺς ὁ ἥλιος. καὶ ἔστιν ὁ καιρὸς οὗτος ὁ παρ' αὐτοῖς τῶν καλουμένων Ἰσίων*. ἐπεὶ δὲ πάλιν ἀναβαίνειν ἤρξατο καὶ μακροτέρας ποιεῖν τὰς ἡμέρας, τηνικαῦτα λευχειμονοῦντες ἐστεφανηφόρησαν*[i].

It is clear that no allusion could have been intended in this passage to the old and mistaken notion exposed by Geminus of the incidence of the Isia at the winter solstice. The sun is here supposed to be in Cancer, not in Capricorn; and the days are supposed to be beginning to decrease, not to increase in length. This state of the case could hold good only at midsummer; i. e. of the summer solstice, not of the winter. The Isia at this time then must have been falling at midsummer, and even at the summer solstice. If so, the Isia, according to the Alexandrine calendar, could not possibly be meant; for those were fixed to the middle of November. What remains then, except to understand this allusion of the cyclical or moveable Isia; the Isia in the equable calendar? In that case, when Achilles Tatius was writing this commentary on Aratus, the equable calendar was still in existence in Egypt: even Isis herself had not yet lost all her votaries in that country: the Isia must have continued to be

* This observation is parenthetic: and we should probably read, *ὁ τῶν παρ' αὐτοῖς καλουμένων Ἰσίων.*

h Opp. vi. 88—91, 92. cf. the notes p. 162.

i Uranologium, 146 C. Achilles Tatius, Isagoge, cap. 23.

celebrated in some way or other according to the old rule; and at this very time must have been falling at midsummer, and possibly on midsummer day, or the summer solstice itself.

It has been made a question whether the commentator on Aratus, and the author of the Greek romance, De Leucippes et Clitophontis Amoribus, were the same person[k]. It is possible that they may have been different; though we are not aware of any clear proof to that effect. The romance is noticed by Photius[l]: but he gives no particulars of the personal history of the author, except that he was a native of Alexandria, (as the commentator on Aratus appears to have been.) Suidas[m] adds that he was a Christian, and even a bishop. From the comparison, instituted by Photius, between *his* case, as the author of one work of fiction of this kind, and that of Heliodorus bishop of Tricca in Thessaly author of another still extant, (the Æthiopica, or history of Theagenes and Chariclea,) it seems very probable that he considered him the later of the two. The date of Heliodorus's work is known[n]; the reign of Theodosius the Great, or that of Honorius and Arcadius his sons, cir. A. D. 400. Achilles Tatius therefore might be considerably later than this.

It appears from our general tables that, from A. D. 505 the ingress of period xxxvii to A. D. 617 that of period xxxviii, the Julian date of the vernal equinox was still March 19: and the length of the spring quarter, for the whole of this period, being nearly 94 days, the date of the summer solstice would be June 21. If the 17 Athyr is to fall on June 21, the 1 of Thoth must fall on April 6: and that was the case from Nabon. 1304—1307 A. D. 556 to 559, but no longer. We consider it probable that the allusion in the above passage of the commentary on Aratus belongs to this time in general: though it is not necessary to suppose it must have been written in one of these years, A. D. 556 to

[k] Fabricius, Bibliotheca Græca, tom. ii. lib. iii. 105, xxiii.

[l] Codex 87. p. 66.

[m] In nomine.

[n] At the end of the work the author describes himself as *ἀνὴρ Φοῖνιξ Ἐμεσηνὸς, τῶν ἀφ' ἡλίου γένος, Θεοδοσίου παῖς Ἡλιόδωρος.* The ecclesiastical historian Nicephorus has left it on record that for writing and publishing this romance, and for refusing to suppress it afterwards, he was deposed by the church from his episcopal office. Cf. Socrates, E. H. v. xxii. 287, C. D.

559. The allusion would be equally consistent with the fact of the incidence of the Isia at midsummer, a few years earlier; and even at the beginning of the sixth century itself*.

* Petavius (Uranologium, 165—169) has given the whole or part of another *Isagoge ad Aratum*, also ascribed to Achilles Tatius: and which appears to have been published as his by his first editor Victorius. The genuineness of this however is open to doubt. In its present state too it is corrupt. There is one passage in it notwithstanding which we think it worth while to produce; because if it is really a production of Achilles Tatius, it may serve to determine his age. Pag. 168 (Περὶ κύκλων): Εὐθὺς μετὰ τοῦτον καταβαίνοντι ἐστὶν ὁ καλούμενος θερινὸς τροπικὸς, (sc κύκλος·) ὅτι γενόμενος ἥλιος ἐν καρκίνῳ, ὃς κεῖται ἐν αὐτῷ, θερινὰς τροπὰς ποιεῖται· κατὰ Μακεδόνας μὲν Παναίμου (lege Πανάμου or Πανήμου) εἰκάδι τετάρτῃ, κατὰ δὲ Ἀλεξανδρεῖς Ἐπιφὶ τετάρτῃ εἰκάδι .... μετὰ τοῦτον ὑποκαταβαίνοντι ἐστὶν ὁ καλούμενος ἰσημερινὸς (κύκλος), ὅτι ὁ ἥλιος ἐν τῷ ζωδιακῷ κύκλῳ φερόμενος, ὅταν κατὰ κριὸν γένηται, ἢ κατὰ χηλὰς, τὰς καλουμένας ὑπ' Αἰγυπτίων ζυγὸν, ἰσημερίαν ποιεῖ, ἅπαξ μὲν Φαμενὼθ εἰκάδι τετάρτῃ *** τουτέστι Γορπιαίου. καὶ ἐν κριῷ μὲν ἐαρινὰς ποιεῖ τροπὰς, ἐν δὲ χηλαῖς ἤτοι ζυγῷ φθινοπωρινάς.

If the reading in the last instance of Phamenoth 24 is sound, it must be meant of the vernal equinox; and there must be an hiatus in the text (not however noticed by Petavius) between Phamenoth 24 and Gorpiæus, in which the date of the autumnal equinox should have come. Now Phamenoth 24 in the Alexandrine calendar always answered to March 20: and March 20, as our tables shew, was still the Julian date of the vernal equinox, down to the beginning of the sixth century.

As to the other dates, Panemus 24 in this author's time could not possibly answer to any thing but June 24; nor Epiphi 24 to any thing but July 18. It is clear then that these dates as they stand are inconsistent. We may render them consistent by reading Panemus 21 in the former, (κα' for κδ') and Paüni 27 (κζ' for κδ') instead of Epiphi 24. Both these will correspond to June 21; the date of the summer solstice answering to March 19 as that of the vernal equinox. But all this is purely conjectural.

In the Anthologia Græca there is an Epigram of Leo Philosophus on the Romance of Achilles Tatius[q]. There is another εἰς βίβλους Πρόκλου καὶ Θέωνος[r]. From the comparison of these together, it might at first sight be supposed that Leo Philosophus, Achilles Tatius, Proclus and Theon, were contemporaries. But though that might be the case with Leo and Achilles Tatius, it could not be the case with Proclus and Theon. In fact, the epigram of Leo which seems to lead to this inference is *on the books* of Proclus and Theon; not on Proclus and Theon themselves. Theon indeed was professor of philosophy at Alexandria in his time: but

q iv. 98. Leo Phil. iv. 1—14. r Ibid. iii.

SECTION VII.—vii. *Autumnal equinox of Albatanius.*

It is not easy to trace the continued use of the equable year in Egypt beyond the point of time to which we have now brought it down; neither is it necessary to do so: and yet there is good ground for believing that it continued in actual use much longer, and survived even the conquest of Egypt by the Arabians, and the introduction of the lunar calendar of Hej'ra into that country. Golius, ad Alferganum[x], has a statement which bears on this point: "Et ne Arabes quidem, ætate multo posteriores, anni intercalaris (the Julian calendar) apud Coptitas seu Ægyptios usum adeo antiquum agnoscunt. nam Ibn Jounis, ubi de computo Ægyptiorum agit, disertis testatur verbis et tunc eorum fuisse quosdam qui priscam anni æquabilis formam adhuc servarent, licet apud alios plerosque omnes intercalatio usu recepta esset." It appears from the Hakemite tables that Ibn Iounis' time was as late as A. D. 1007. It is not surprising therefore that a genuine equable date is still to be met with, corresponding to Nabon. 1630, A. D. 882: with an account of which we shall conclude our observations on this subject for the present.

In the Hakemite tables of Abul Hassan Ebn Iounis (the same Ibn Iounis alluded to by Golius) an autumnal equinox

we do not know that Proclus was so. He settled early at Athens[s], and succeeded Syrianus in the chair of philosophy there, (hence his title of Diadochus,) as he himself was succeeded by Marinus, who wrote his life. In his own commentary on the Timæus, there is a passage[t], from which it may be collected that he reckoned 1500 years between his own time and that of Homer: and supposing him to have made Homer as old as the return of the Heraclidæ, cir. B. C. 1080, this would give his own age some time in the 5th century. In fact it is generally assumed that Proclus died in A. D. 485, and was born in A. D. 412; so that his acme would coincide with A. D. 450.

Some of the learned have thought that Achilles Tatius is referred to by Firmicus, De Astrologia, lib. iv. x: and Firmicus' time was the reign of Constantius[u]. But this is a doubtful point; Achilles only being there mentioned, (not Achilles Tatius,) along with Abram another astrologer.

[s] See supra, Diss. iv. ch. ii. sect. v. Art. ix. Cf. Photius, Cod. 242. p. 345. l. 18. Anthologia, iii. 153. Proclus, vi. Suidas, Πρόκλος.

[t] Δ. (iv.) 671 = 277 D—E.

[u] See lib. i. Præfatio, &c. cap. iv: and lib. i. cap. ii, the solar eclipse mentioned by him in the consular year of Optatus and Facundus.

[x] Pag. 5 and p. 47.

is left on record[y], observed by Albatani at Raccah or Aracta, dated by him on the 19th of Elul, in the Syrian calendar, the 8th of Pachon in the Coptic, and in the æra of Alex. 1206, æra Sel. 1194.

By this æra of Alexander the æra Philippi is meant; in in which 1206=Nab. 1630. Nab. 1630 entered on Thoth 1 at midnight; January 15 at midnight, A. D. 882: and supposing Pachon 8, in this instance, to be reckoned from Thoth 1, Nab. 1630, it comes out Sept. 19 at midnight, A. D. 882; which was also the same as the Syrian Elul 19 at midnight.

The mean vernal equinox for the meridian of our tables, A. D. 882, bore date March 18, 9 h. 23 m. 24 s. The true was two days earlier. The length of the spring and summer quarters at this time being 186 or 187 days, the autumnal equinox would fall September 19 after midnight. The meridian of Aracta may not be exactly known: but it could not have differed less than 14 or 15 minutes, *east*, from that of Jerusalem. It is certain then that the date of this equinox, even for that meridian, must have been the morning of September 19 A. D. 882. According to Albatani himself (apud Ebn Iounis) it was determined by observation to 4 h. 45 min. before sunrise: i. e. Sept. 19 at 1 h. 15 min. A. M. In this case Pachon 8 its Egyptian date could have been taken only from the equable calendar. The Alexandrine Pachon 8 must have been May 3. Yet Albatanius called it the Coptic Pachon. It is manifest too that he must have reckoned this Pachon 8 either from Sept. 18 at noon, (which is most probable,) or from Sept. 18 at sunset.

It appears too that he dated the observation æra Sel. 1194. That year, as our tables shew, would enter October 1 A. D. 882; too late consequently for this date of Sept. 19 or Elul 19, if reckoned from October 1: but not so, if reckoned from Sept. 1. Learned men therefore have inferred from this distinction, (and justly,) that the epoch of the æra Seleucidarum, recognised by Albatanius, was Sept. 1, not October 1, B. C. 312.

y Notices et Extraits, (MSS. of the royal or national library at Paris,) vii. partie Ie. 148.

# DISSERTATION XIII.

*On the Apis cycle of the Egyptians.*

## CHAPTER I.

Section I.—*On the cycles of the Egyptians in general.*

The review which we have just brought to a close is sufficient, in our opinion, to satisfy any candid and unprejudiced inquirer, that the Egyptian calendar, from the earliest to the latest times, was always the same; and always identical with the equable calendar, cyclical or Nabonassarian, of our own Fasti. The reader however must not suppose that this is the only proof of that fact, which we have to produce. We began that review with observing that we intended it merely as preparatory to inquiries of a different kind: and we are willing to abide by that profession. Let it still be considered an open question, whether the civil calendar of Egypt was always of one kind, and always the same with the equable calendar of our Fasti. We have vouchers and proofs of that identity yet in reserve, (if it be the pleasure of God that we should lay them before our readers in all their details,) which will leave no doubt about it; vouchers and proofs, supplied by a branch of our subject to which we have hitherto scarcely alluded, the cycles of ancient Egypt: the derivation, the constitution, the final end and design, the use and application, of the cycles of ancient Egypt.

These cycles (with one exception) were not the same thing as the calendar of the Egyptians; but they were all, without exception, derived from it: they all presuppose and recognise it: most of them were constantly associated with it: all alike serve to attest and substantiate it. And though the number of such cycles among the Egyptians, derived from the same civil form of the calendar, (only at different times,) appears to have been considerable, (greater in all

probability than is likely ever to be known at present;) it is sufficient for our purpose to specify *four*, as those of which we propose and of which we hope to give such an account as shall be demonstrative of their connection both with the actual civil calendar of Egypt, and with the primitive civil calendar exhibited in our Fasti from the first: the Phœnix cycle, the Mneuis cycle, the Sothiacal cycle, and the Apis cycle.

With respect to these four cycles in particular; without meaning any disparagement to the ability the zeal and the industry which have been devoted to researches of this kind by the learned of modern times; we are compelled by the truth to say That nothing is known of them at all, or nothing for certain. Of the Phœnix, the Mneuis, and the Apis cycles nothing is known at all; of the Sothiacal cycle, or more correctly to speak, of the Sothiacal *period*, something is known: but that something is so mixed up with error as to be totally useless for any practical purpose, and to have served hitherto only to mislead the learned, and to keep them in ignorance of the truth. We may assert therefore, and we feel ourselves bound to assert, even at the risk of offending the strongest and most inveterate prejudices, that on these points, eagerly and ardently as they have been investigated by the learned and curious of modern times, the utmost amount of misconception, and consequently the utmost degree of ignorance, of the truth still prevails; and, to judge from the experience of the past, must still have prevailed to the end of time itself, had it not pleased the only Author and Source of all knowledge and of all wisdom, in his own time and in his own way, and to serve his own wise and benevolent purposes for the good of men themselves, to bring the primitive calendar to light, which was the only clue to these further discoveries; and therefore to leave the learned both of this country and of all other countries utterly without excuse, if they still choose to prefer the *ignis fatuus* of the pseudo-chronology of Egypt, of China, of Hindoostan, or of any people or of any country in the world besides, to the only true system of mundane time, which he himself has revealed in the Bible.

## SECTION II.—*On the Apis cycle. Testimonies to the Apis; general and particular.*

If the cycles which we have enumerated were to be considered in their order of time respectively, we must have begun with the Phœnix cycle; for that is the oldest of all. It makes little difference however in what order they are considered: or rather, we shall find it the most convenient course which we can adopt, to trace them backwards, from the last of all to the first of all.

We propose therefore to take the Apis cycle first: for that was the youngest of all. And we shall enter upon its consideration by collecting together and stating the extant testimonies of antiquity relating to the Egyptian Apis, such as have fallen in our way: i. The more general; ii. The more particular and circumstantial: testimonies to its existence in Egypt; to its estimation and worship in that country; to its generation and birth; to its description, its characteristic marks and distinctions; to its treatment both in its lifetime and after its death: and the like. We must premise however that, besides the Apis, the Egyptians had another sacred bull, called Mneuis; and that, from the nature of the case, allusions to the one are frequently intermingled with allusions to the other. But we shall endeavour to keep them as distinct as we can; producing the testimonies to the Apis at present, and reserving those to the Mneuis for a future opportunity.

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i. Δῆλον γὰρ ὅτι τῷ ταύτην ποιουμένῳ τὴν αἵρεσιν, οὐθὲν ἂν διενέγκειε γενέσθαι θηρίον ἢ ἄνθρωπον· ὁ γοῦν ἐν Αἰγύπτῳ βοῦς ὃν ὡς Ἆπιν τιμῶσιν ἐν πλείοσι τῶν τοιούτων ἐξουσιάζει πολλῶν μοναρχιῶν [n]—At vero ne fando quidem auditum est crocodilum aut ibim aut felim violatum ab Ægyptio. quid igitur censes? Apim illum sanctum Ægyptiorum bovem nonne deum videri Ægyptiis [o]—Bos quoque immolatur quam Ægyptii Apin colunt [p]—Καὶ Αἰγύπτιοι ὕδατι· καίτοι μὲν ἅπασι κοινὸν τοῖς Αἰγυπτίοις τὸ ὕδωρ, ἰδίᾳ δὲ Μεμφίταις μὲν ὁ βοῦς

[n] Aristotle, Ethica Eudemidea, i. 5: Opp. ii. 1215. 35. l. 6.

[o] Cicero, De Natura Deor. i. 29. § 82. Cf. De Republica, iii. 91. (Heinrichii, Bonnæ ad Rhenum, 1828.)

[p] Tacitus, Histor. v. 4.

*θεός* [q]—Τί δὲ βουλόμενος καὶ ὁ Μεμφίτης οὗτος ταῦρος ὁ ποικίλος προσκυνεῖται καὶ χρᾷ καὶ προφήτας ἔχει [r]—Ἱεροῦται δὲ ἄρα τῇ Ἀφροδίτῃ (τῇ) Ἰνδῇ τοιαύτη (τις γυνὴ), καὶ τίκτεται τῇ θεῷ γυνὴ ποικίλη, καθάπερ ὁ Ἆπις Αἰγυπτίοις [s]—Μέμφομαι καὶ τὸν Αἰγυπτίων νόμον. βοῦν ἐκεῖνοι τιμῶσι ......ἀποθνήσκει θεὸς Αἰγυπτίοις, καὶ πενθεῖται θεὸς, καὶ δείκνυται παρ' αὐτοῖς ἱερὸν θεοῦ καὶ τάφος θεοῦ [t]—Infinitum est describere ...quam is pœnam constituerit Ægyptius in eum qui publicasset quibus Apis jaceret absconditus [u]—Καὶ κατεχέτω τὴν οἰκουμένην κωκυτὸς ὁποῖος τὴν Αἴγυπτον ἐπ' οἰχομένῳ τῷ Ἄπιδι [w]—Τὸν μὲν γὰρ ψυχοπομπὸν Ἑρμῆν κατὰ τὸ παλαιὸν νόμιμον παρ' Αἰγυπτίοις ἀναγαγόντα τοῦ Ἄπιδος τὸ σῶμα μέχρι τινὸς παραδιδόναι τῷ περικειμένῳ τὴν τοῦ Κερβέρου προτομήν [x]—Ἃ δ' ἐμφανῶς δρῶσι θάπτοντες τὸν Ἆπιν οἱ ἱερεῖς, ὅταν παρακομίζωσιν ἐπὶ σχεδίας τὸ σῶμα, βακχείας οὐδὲν ἀποδεῖ. καὶ γὰρ νεβρίδας περικαθάπτονται καὶ θύρσους φοροῦσι καὶ βοαῖς χρῶνται καὶ κινήσεσιν, ὥσπερ οἱ κάτοχοι τοῖς περὶ τὸν Διόνυσον ὀργιασμοῖς [y]—Ὁ μὲν γὰρ Ἆπις ὁ μέγιστος θεὸς αὐτοῖς ἂν ἀποθάνῃ, τίς οὕτω περὶ πολλοῦ ποιεῖται τὴν κόμην ὅστις οὐκ ἀπεξύρησε, καὶ ψιλὸν ἐπὶ τῆς κεφαλῆς τὸ πένθος ἀπεδείξατο; ἔστι δὲ ὁ Ἆπις ἐξ ἀγέλης θεὸς ἐπὶ τῷ προτέρῳ χειροτονούμενος, πολὺ καλλίων καὶ σεμνότερος τῶν ἰδιωτῶν βοῶν [z].

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ii. Nile pater! quanam possum te dicere caussa,
    Aut quibus in terris occuluisse caput?
Te propter nullos tellus tua postulat imbres,
    Arida nec pluvio supplicat herba Jovi.
Te canit atque suum pubes miratur Osirin
    Barbara Memphitem plangere docta bovem [a].

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Cum medio noctis spatio sub imagine somni
Inachis ante torum pompa comitante suorum
Aut stetit aut visa est. inerant lunaria fronti
Cornua cum spicis nitido flaventibus auro,

[q] Lucian, Jupiter Tragœdus, 42, 11: Opp. ii. 694.

[r] Ibid. Deorum concilium, 10, 62. Opp. iii. 533. Cf. De Astrologia, 7, 75. Opp. ii. 363.

[s] Philostratus, Vita Apollonii, iii. i. 110. B.

[t] Maximus Tyrius, viii. 5. p. 85. Cf. xxii. 6. 269: 271: xxv. 3. 303.

[u] Arnobius, vi. 193, 194. Lugd. Bat. 1651, (Maire.) Cf. Porphyrii Epistola ad Anebonem, apud Gale, (Iamblichus, De Mysteriis,) pag. vi. l. 18–31.

[w] Libanius, Μονῳδία ἐπὶ Νικομηδείᾳ, lxii: Opp. iii. 344. 3: overthrown by an earthquake, ix. kal. Sept. Aug. 24. A. D. 358. See Ammianus Marcellinus, xvii. 7. 135: 5. 131.

[x] Diodorus Sic. i. 96.

[y] Plutarch, De Iside et Osiride, xxxv.

[z] Lucian, De Sacrificiis, 15. 55: Opp. i. 538. Cf. De Dea Syria, 6. 68: Opp. iii. 454.

[a] Tibullus, i. vii. 23.

Et regale decus: cum qua latrator Anubis
Sanctaque Bubastis variusque coloribus Apis
Quique premit vocem digitoque silentia suadet
Sistraque erant, numquamque satis quæsitus Osiris,
Plenaque somniferi serpens peregrina veneni [b].

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Isi Phoroneis quondam stabulata sub antris,
Nunc regina Phari numenque Orientis anheli,
Excipe multisono puppim Mareotida sistro,
Et juvenem egregium, Latius cui ductor Eöa
Signa Palæstinasque dedit frenare cohortes.
Ipsa manu placida per limina festa sacrosque
Duc portus urbesque tuas: te præside noscat
Unde paludosi fœcunda licentia Nili:
Cur vada desidant et ripa coerceat undas
Cecropio signata luto ......

* * *

Vilia cur magnos æquent animalia divos:
Quæ sibi præsternat vivax altaria phœnix:
Quos dignetur agros, aut quo se gurgite Nili
Mergat adoratus trepidis pastoribus Apis [c].

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Non per mystica sacra Dindymenes,
Non per Niliacæ bovem juvencæ,
Nullos denique per deos deasque
Jurat Gellia, sed per uniones [d].

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iii. Βουλομένην δὲ τὴν Ἶσιν καὶ τῷ λυσιτελεῖ προτρέψασθαι τοὺς ἱερεῖς ἐπὶ τὰς προειρημένας τιμὰς, τὸ τρίτον μέρος τῆς χώρας αὐτοῖς δοῦναι πρὸς τὰς τῶν θεῶν θεραπείας τε καὶ λειτουργίας. τοὺς δὲ ἱερεῖς λέγεται μνημονεύοντας τῶν Ὀσίριδος εὐεργεσιῶν καὶ τῇ παρακαλούσῃ βουλομένους χαρίζεσθαι πρὸς δὲ τούτοις τῷ λυσιτελεῖ προκληθέντας πάντα πρᾶξαι κατὰ τὴν Ἴσιδος ὑποθήκην. διὸ καὶ μέχρι τοῦ νῦν ἑκάστους τῶν ἱερέων ὑπολαμβάνειν παρ' ἑαυτοῖς τεθάφθαι τὸν Ὄσιριν, καὶ τά τε ἐξ ἀρχῆς ἀφιερωθέντα ζῶα

[b] Ovid. Metam. ix. 685. In the last line the asp is meant: the poison of the asp being notoriously of that description. It made a stated part of the representation of Isis. See Ælian, De Natura Anim. x. 31: Apuleius, Metamorphos. xi. 262, 263.

Hæc procul Io
Spectat ab arce poli jam divis addita jamque
Aspide cincta comas et ovanti persona sistro. Valer. Flacc. Argon. iv. 416.
Et movisse caput visa est argentea serpens. Juvenal, vi. 537.
Quæ est, observes the vetus Scholiasta, in templo Isidis.

[c] Statius, Protrepticon Metio Celeri. Sylv. iii. ii. 101.

[d] Martial, Epigramm. viii. 81. 1.

*τιμᾷν, καὶ τελευτησάντων αὐτῶν ἐν ταῖς ταφαῖς ἀνανεοῦσθαι τὸ τοῦ Ὀσίριδος πένθος. τοὺς δὲ ταύρους τοὺς ἱεροὺς, τόν τε ὀνομαζόμενον Ἄπιν καὶ τὸν Μνεῦιν, Ὀσίριδι καθιερωθῆναι, καὶ τούτους σέβεσθαι καθάπερ θεοὺς κοινῇ καταδειχθῆναι πᾶσιν Αἰγυπτίοις. ταῦτα γὰρ τὰ ζῶα τοῖς εὑροῦσι τὸν τοῦ σίτου καρπὸν συνεργῆσαι μάλιστα πρός τε τὸν σπόρον καὶ τὰς κοινὰς ἁπάντων ἐκ τῆς γεωργίας ὠφελείας*[e]—*Τοὺς δὲ ταύρους τοὺς ἱεροὺς, λέγω δὲ τόν τε Ἄπιν καὶ Μνεῦιν, τιμᾶσθαι παραπλησίως τοῖς θεοῖς, Ὀσίριδος καταδείξαντος· ἅμα μὲν διὰ τὴν τῆς γεωργίας χρείαν ἅμα δὲ καὶ διὰ τὸ τῶν εὑρόντων τοὺς καρποὺς τὴν δόξαν ταῖς τούτων ἐργασίαις παραδόσιμον γεγονέναι τοῖς μεταγενεστέροις εἰς ἅπαντα τὸν αἰῶνα*[f].

*Ἐγγὺς δὲ καὶ ἡ Μέμφις αὐτὴ, τὸ βασίλειον τῶν Αἰγυπτίων. ἔστι γὰρ ἀπὸ τοῦ Δέλτα τρίσχοινον εἰς αὐτήν. ἔχει δὲ ἱερὰ, τά τε τοῦ Ἄπιδος ὅς ἐστιν ὁ αὐτὸς καὶ Ὄσιρις, ὅπου ὁ βοῦς ὁ Ἄπις ἐν σηκῷ τινι τρέφεται θεὸς ὡς ἔφην νομιζόμενος, διάλευκος τὸ μέτωπον καὶ ἄλλα τινὰ μικρὰ τοῦ σώματος, τὰ δ' ἄλλα μέλας· οἷς σημείοις ἀεὶ κρίνουσι τὸν ἐπιτήδειον εἰς τὴν διαδοχὴν, ἀπογενομένου τοῦ τὴν τιμὴν ἔχοντος. ἔστι δ' αὐλὴ προκειμένη τοῦ σηκοῦ, ἐν ᾗ καὶ ἄλλος σηκὸς τῆς μητρὸς τοῦ βοός· εἰς ταύτην δὲ τὴν αὐλὴν ἐξαφιᾶσι τὸν Ἄπιν καθ' ὥραν τινὰ καὶ μάλιστα πρὸς ἐπίδειξιν τοῖς ξένοις· ὁρῶσι μὲν γὰρ καὶ διὰ θυρίδος ἐν τῷ σηκῷ· βούλονται δὲ καὶ ἔξω. ἀποσκιρτήσαντα δὲ ἐν αὐτῇ μικρὰ ἀναλαμβάνουσι πάλιν εἰς τὴν οἰκείαν στάσιν*[g].

*Ἡλίῳ μὲν γὰρ καὶ Σελήνῃ βοῦς ἀνιέρωσαν . . . Σελήνῃ δὲ ταῦρον ἀνέθεσαν ὃν Ἄπιν ἐπονομάζουσι, μέλανα μὲν καὶ αὐτὸν ὑπὲρ τοὺς ἄλλους, φέροντα δὲ σημεῖα ἡλίου καὶ σελήνης, ὅτι καὶ σελήνης τὸ φῶς ἐξ ἡλίου. ἡλίου δὲ σημεῖον τὸ μέλαν τοῦ σώματος, καὶ ὁ ὑπὸ τῇ γλώττῃ κάνθαρος· σελήνης δὲ σύμβολον τό τε διχότομον καὶ ἀμφίκυρτον*[h]——*Ἄπις*[i]......*τοῦτον Αἰγύπτιοι σελήνῃ τιμῶσι, καὶ ἱερὸς ἦν ὅδε ὁ βοῦς τῆς σελήνης ὥσπερ ὁ Μνεῦις τοῦ ἡλίου.*

iv. *Ὅτι κατὰ περίοδόν τινα τοῦ χρόνου ἐγεννᾶτο τοῖς Αἰγυπτίοις βοῦς, ἔχων σημεῖά τινα περὶ τὴν γλῶτταν καὶ τὴν κέρκον, ἐξ ὧν ἐγνωρίζετο ὅτι Ἄπις, ἤγουν θεός· ὅθεν καὶ ἑορτὴν ἐποίουν ὡς θεοῦ αὐτοῖς ἐνδημήσαντος· καὶ παρατιθέασι τῷ βοῒ πανδαισίαν ἐν*

e Diodorus Sic. i. 21. Cf. Eusebius, Præp. Evang. ii. i. p. 103.

f Diod. Sic. i. 88. Præp. Evang. ii. i. p. 109.

g Strabo, xvii. 1.

h Porphyry, apud Euseb. Præp. Evang. iii. xiii. 252, 253.

i Suidas, in voce.

τῇ φάτνῃ πολλὴν, εὐωχοῦντες τὸν θεὸν αὐτῶν[k]—Ἄπιδες[l]· θεοὶ ἦσαν τιμώμενοι παρ᾽ Αἰγυπτίοις, σημεῖον ἔχοντες περὶ τὴν οὐρὰν καὶ τὴν γλῶσσαν δηλοῦν εἶναι αὐτοὺς Ἄπιδας· οἷς γεννωμένοις διὰ χρόνου ὡς ἔλεγον ἐκ τοῦ σέλαος τῆς σελήνης ἑορτὴν μεγάλην ἦγον, καὶ ἱερεῖς τινες περὶ τὸν τεχθέντα βοῦν ἱερῶντο παρατιθέντες πανδαισίαν ὡς εὐωχοῦντες αὐτούς.

Καὶ οὐκ ἐμὸς ὁ μῦθος, εἶπεν, ἀλλ᾽ Αἰγύπτιοι τόν τε Ἄπιν οὕτως λοχεύεσθαί φασιν ἐπαφῇ τῆς σελήνης[m]—Ἀπιγμένου δὲ Καμβύσεω ἐς Μέμφιν ἐφάνη Αἰγυπτίοισι ὁ Ἄπις τὸν Ἕλληνες Ἔπαφον καλέουσι. ἐπιφανέος δὲ τούτου γενομένου αὐτίκα οἱ Αἰγύπτιοι εἵματά τε ἐφόρεον τὰ κάλλιστα καὶ ἦσαν ἐν θαλίῃσι[n]—Ὁ δὲ Ἄπις οὗτος ὁ Ἔπαφος γίνεται μόσχος ἐκ βοὸς ἥτις οὐκέτι οἵη τε γίνεται ἐς γαστέρα ἄλλον βάλλεσθαι γόνον. Αἰγύπτιοι δὲ λέγουσι σέλας ἐπὶ τὴν βοῦν ἐκ τοῦ οὐρανοῦ κατίσχειν καί μιν ἐκ τούτου τίκτειν τὸν Ἄπιν. ἔχει δὲ ὁ μόσχος οὗτος ὁ Ἄπις καλεόμενος σημήϊα τοιάδε· Ἔων μέλας ἐπὶ μὲν τῷ μετώπῳ λευκὸν τετράγωνον, ἐπὶ δὲ τοῦ νώτου αἰετὸν εἰκασμένον· ἐν δὲ τῇ οὐρῇ τὰς τρίχας διπλᾶς, ἐπὶ δὲ τῇ γλώσσῃ κάνθαρον[o].

Προσθετέον δὲ τοῖς εἰρημένοις τὰ λειπόμενα τῶν γινομένων περὶ τὸν ἱερὸν ταῦρον τὸν ὀνομαζόμενον Ἄπιν. ὅταν γὰρ τελευτήσας ταφῇ μεγαλοπρεπῶς, ζητοῦσιν οἱ περὶ ταῦτ᾽ ὄντες ἱερεῖς μόσχον ἔχοντα κατὰ τὸ σῶμα παράσημα τὰ παραπλήσια τῷ προϋπάρξαντι. ὅταν δ᾽ εὑρεθῇ, τὰ μὲν πλήθη τοῦ πένθους ἀπολύεται, τῶν δ᾽ ἱερέων οἷς ἐστὶν ἐπιμελὲς ἄγουσι τὸν μόσχον τὸ μὲν πρῶτον εἰς Νείλου πόλιν, ἐν ᾗ τρέφουσιν αὐτὸν ἐφ᾽ ἡμέρας τετταράκοντα. ἔπειτα εἰς θαλαμηγὸν ναῦν οἴκημα κεχρυσωμένον ἔχουσαν ἐμβιβάσαντες ὡς θεὸν ἀνάγουσιν εἰς Μέμφιν, εἰς τὸ τοῦ Ἡφαίστου τέμενος[p]. ἐν δὲ ταῖς προειρημέναις τετταράκονθ᾽ ἡμέραις μόνον ὁρῶσιν αὐτὸν αἱ γυναῖκες κατὰ πρόσωπον ἱστάμεναι, καὶ δεικνύουσιν ἀνασυράμεναι τὰ ἑαυτῶν γεννητικὰ μόρια· τὸν δ᾽ ἄλλον χρόνον ἅπαντα κεκωλυμένον ἐστὶν εἰς ὄψιν αὐτὰς ἔρχεσθαι τούτῳ τῷ θεῷ. τῆς δὲ τοῦ βοὸς τούτου τιμῆς αἰτίαν ἔνιοι φέρουσι λέγοντες ὅτι τελευτήσαντος Ὀσίριδος εἰς τοῦτον ἡ ψυχὴ αὐτοῦ μετέστη, καὶ διὰ ταῦτα διατελεῖ μέχρι τοῦ νῦν ἀεὶ κατὰ τὰς ἀναδείξεις αὐτοῦ μεθισταμένη πρὸς τοὺς μεταγενεστέρους· ἔνιοι δὲ λέγουσι τελευτήσαντος Ὀσίριδος ὑπὸ Τυφῶνος τὰ μέλη συναγαγοῦσαν τὴν Ἶσιν εἰς βοῦν ξυλινὴν ἐμβαλεῖν βύσσινα περιβεβλημένην, καὶ διὰ τοῦτο καὶ τὴν πόλιν

k Anecdota Græca Oxoniensia, (Cramer, Oxonii, 1837.) iv. 245. 1. Chronicon Georgii Hamartoli.

l Suidas, in voce.

m Plutarch, Symposiaca, viii. Problema i. 3.

n Herodotus, iii. 27.

o Ibid. iii. 28.

p Cf. Strabo, xvii. 1.

*ὀνομασθῆναι* Βούσιριν. *πολλὰ δὲ καὶ ἄλλα μυθολογοῦσι περὶ τοῦ* Ἄπιδος, *ὑπὲρ ὧν μακρὸν ἡγούμεθα τὸ καθ' ἕκαστον διεξιέναι*[q].

v. Bos in Ægypto etiam numinis vice colitur. Apim vocant. insigne ei in dextro latere candicans macula cornibus lunæ crescere incipientis: nodus sub lingua quem cantharum adpellant. non est fas eum certos vitæ excedere annos, mersumque in sacerdotum fonte enecant, quæsituri luctu alium quem substituant: et donec invenerint mœrent, derasis etiam capitibus. nec tamen unquam diu quæritur. inventus deducitur Memphim a sacerdotibus. delubra ei gemina, quæ vocant thalamos, auguria populorum. alterum intrasse lætum est: in altero dira portendit. responsa privis dat e manu consulentium cibum capiendo. Germanici Cæsaris manum aversatus est, haud multo postea exstincti. cetero secretus quum se proripuit in cœtus incedit summotu lictorum, grexque puerorum comitatur, carmen honori ejus canentium: intelligere videtur et adorari velle. hi greges repente lymphati futura præcinunt. femina bos semel ei anno ostenditur, suis et ipsa insignibus quamquam aliis: semperque eodem die et inveniri eam et exstingui tradunt. Memphi est locus in Nilo, quem a figura vocant Phialam: omnibus annis ibi auream pateram argenteamque mergunt iis diebus quos habent natales Apis: septem hi sunt, mirumque neminem per eos a crocodilis adtingi: octavo post horam die sextam redire belluæ feritatem[r].

Apis populorum omnium numen est: bos niger certis maculis insignis et cauda linguaque dissimilis aliorum. raro nascitur, nec coitu pecudis ut aiunt, sed divinitus et cœlesti igne conceptus: diesque quo gignitur genti maxime festus est[s].

Inter omnia quæ Ægyptus habet digna memoratu præcipue bovem mirantur: Apim vocant. hunc ad instar colunt numinis, insignem notæ albæ macula, quæ dextero ejus lateri

[q] Diodorus Sic. i. 85.

[r] Pliny, H. N. viii. 71. It may be inferred from Seneca, that a similar ceremony, and at the same time, took place in a different part of the Nile, near Philæ or Syene. "Post magnum deinde spatium duo eminent scopuli: Nili venas vocant incolæ. ex quibus magna vis funditur; non tamen quanta operire posset Ægyptum. in hæc ora stipem sacerdotes et aurea dona præfecti quum sollemne venit sacrum jaciunt." Naturalium Quæst. iv. ii. 7; (cf. ii. 2, 3.) Opp. v.; Pliny, H. N. v. 10; Timæus mathematicus occultam protulit rationem: Phialam adpellari fontem ejus, mergique in cuniculos ipsum amnem, vapore anhelantem, fumidis cautibus ubi conditur. Cf. Solinus, Polyhistor, xxxii. 11; Lucan, Phars. x. 323.

[s] Pomponius Mela, i. 9.

ingenita corniculantis lunæ refert faciem. statum ævi spatium est: quod ut adfuit profundo sacri fontis inmersus necatur, ne diem longius trahat quam licebit. mox alter nec sine publico luctu requiritur: quem repertum centum antistites Memphim prosequuntur, ut incipiat sacris ibi initiatus sacer fieri[t]. delubra quibus succedit aut incubat mystice thalamos nominant. dat omina manifestantia de futuris: illud maximum, si de consulentium manu cibum capiat. denique aversatus Germanici Cæsaris dexteram prodidit ingruentia: nec multo post Cæsar exstinctus est. pueri Apim gregatim sequuntur, et repente velut lymphatici ventura præcinunt. bos illi ostenditur femina in anno semel, et ipsa non absque certis insignibus; quæ atque inventa et oblata est eadem die neci datur. Apis natalem Memphi celebrant jactu aureæ pateræ, quam projiciunt in Nili statum gurgitem. hæc sollemnitas per septem dies agitur: quibus diebus cum sacerdotibus quasdam crocodili inducias habent, nec adtrectant lavantes: verum octavo die cæremoniis jam peractis velut reddita sæviendi licentia solitam resumunt atrocitatem[u].

Inter animalia antiquis observationibus consecrata Mnevis et Apis sunt notiora. Mnevis soli sacratur: super quo nihil dicitur memorabile: sequens lunæ. est enim Apis bos diversis genitalium notarum figuris expressus, maximeque omnium corniculantis lunæ specie latere dextro insignis. qui cum post vivendi spatium præstitutum sacro fonte inmersus e vita abierit, (nec enim ultra eum trahere licet ætatem quam secreta librorum præscribit auctoritas mysticorum, nec nisi semel ei in anno bos femina inventa cum notis certis obfertur,) alter cum publico quæritur luctu: et si omnibus signis consummatus reperiri potuerit, ducitur Memphim urbem frequentem præsentiaque numinis Æsculapii claram. cumque initiante antistitum numero centum inductus in thalamum esse cœperit sacer conjecturis apertis signa rerum futurarum dicitur demonstrare: et adeuntes quosdam indiciis averti videtur obliquis: ut obferentem cibum aliquando Germanicum Cæsarem, sicut lectum est, aversatus portenderat paullo post eventura[w]. *De crocodilis*[x]*:* Et sævientes semper eædem feræ quasi pacto fœdere quodam castrensi per septem cærimonio-

t Cf. Isidore, Origg. viii. 11. 71. H.
u Solinus, Polyhistor, xxxii. 17.
w Ammianus Marcellinus, xxii. 14, ad fin.
x Ibid. 15. p. 322.

sos dies mitescunt, ab omni sævitia desciscentes, quibus sacerdotes Memphi natales celebrant Apis.

vi. Εἶτα κύκνων μὲν τῶν Ῥιπαίων τῶν ἐν τοῖς Ὑπερβορείοις, ἐπεὶ λατρεύουσι τῷ Διὸς καὶ Λητοῦς ὁσημέραι, φιλοπόνως ἐποιησάμην μνήμην· ταύρου δὲ ἱεροῦ, ὅνπεροῦν ἐκθεοῦσιν Αἰγύπτιοι, οὐκ ἐροῦμεν τὰ ἴδια; καὶ πῶς ἡμᾶς οὐκ ἂν μέμψαιτο καὶ ἡ συγγραφὴ καὶ ἡ φύσις, ἧς καὶ τοῦτο ἔργον τε καὶ δῶρον; ἀλλὰ μνήσεώς γε οὐδὲ ταύτῃ ῥᾴθυμον· καὶ εἰκότως εἰρήσεται καὶ ἡ θεολογία ἥδε.

Θεὸς Αἰγυπτίοις ἐναργέστατος ὁ Ἄπις εἶναι πιστεύεται· γίνεται δὲ ἐκ βοὸς εἰς ἣν οὐράνιον σέλας ἐμπεσὸν σπορᾶς αἴτιόν ἐστι τῷ προειρημένῳ. Ἕλληνες αὐτὸν καλοῦσιν Ἔπαφον, καὶ γενεαλογοῦσίν οἱ μητέρα Ἰὼ τὴν Ἀργείαν τὴν Ἰνάχου. Αἰγύπτιοι δὲ ἐκβάλλουσι τὸν λόγον ὡς ψευδῆ· καὶ χρῶνται τῷ χρόνῳ μάρτυρι· φασὶ γὰρ Ἔπαφον μὲν ὀψὲ καὶ κάτω γενέσθαι, τὸν δὲ Ἄπιν τὸν πρῶτον μυριάδας ἐτῶν παμπολλὰς τὴν εἰς ἀνθρώπους ἐπιδημίαν προειληφέναι.

Σημεῖα δὲ αὐτοῦ καὶ γνωρίσματα λέγει μὲν καὶ Ἡρόδοτος καὶ Ἀρισταγόρας. οὐχ ὁμολογοῦσι δὲ αὐτοῖς Αἰγύπτιοι· ἐννέα καὶ εἴκοσι γὰρ αὐτὰ εἶναί φασι, καὶ ἐμπρέπειν τῷδε τῷ ἱερῷ βοΐ. τίνα δὲ ταῦτ᾽ ἐστὶ καὶ ὅπως διέσπαρται κατὰ τοῦ σώματος τῷ ζῴῳ, καὶ ὄντινα τρόπον οἱονεὶ διήνθισται αὐτοῖς, ἀλλαχόθεν εἴσεσθε· ὅτου δὲ τῶν ἀστέρων ἕκαστον σημεῖον διὰ συμβόλων αἰνίττεται τὴν φύσιν Αἰγύπτιοι τεκμηριῶσαι ἱκανοί. καὶ γάρ τοι καὶ τὴν ἄνοδον τὴν τοῦ Νείλου ὑποδηλοῦν σημεῖόν φασι (εἶναι) καὶ τὸ τοῦ κόσμου σχῆμα. ἀλλ᾽ ὄψει τι καὶ σύμβολον ὡς ἐκεῖνοι λέγουσιν ὅπερ οὖν αἰνίττεται τοῦ φωτὸς εἶναι τὸ σκεῦος (leg. σκότος) πρεσβύτερον. καὶ τὸ μηνοειδὲς τῆς σελήνης κατηγορεῖ σχῆμα συνιέντι μέρος ἄλλο. καὶ ἄλλα δὲ ἐπὶ τούτοις ἄλλων τε αἰνίγματα, βεβήλοις τε καὶ ἀμαθέσιν ἱστορίας θεοπρεποῦς οὐκ εὐσύμβολα ταῦτα ὀφθαλμοῖς ὄντα.

Ὅταν δὲ διαρρεύσῃ ἡ φήμη τὸν θεὸν Αἰγυπτίοις τετέχθαι λέγουσα, τῶν γραμματέων τῶν ἱερῶν τινες, οἷσπερ οὖν μάθημα παιδὶ ἐκ πατρὸς παραδοθὲν ἀκριβοῖ τὸν ὑπὲρ τῶν σημείων ἔλεγχον, ἥκουσιν ἐνταῦθα οὗ τῆς θεοῦ φασιν Αἰγύπτιοι βοὸς τὸ βρέφος ἐτέχθη. καὶ κατά γε τὴν ὑφήγησιν τοῦ Ἑρμοῦ τὴν πρεσβυτάτην οἰκίαν τε ἐγείρουσιν ἔνθα δήπου καὶ διαιτήσεται τήν γε πρώτην, εἰς ἡλίου μὲν ἀνατολὰς ὁρῶσαν τροφὰς δὲ τὰς τοῦ βρέφους ὑποδέξασθαι καὶ μάλαγε ἱκανήν· τεττάρων γὰρ δεῖ μηνῶν ἐν γάλαξι τόνδε εἶναι τὸν μόσχον.

Ἐπὰν δὲ γένηται τραφεὶς, ἐνταῦθά τοι ὑπανισχούσης σελήνης νέας ἀπαντῶσι γραμματεῖς ἱεροὶ καὶ προφῆται. καὶ μέντοι καὶ ναῦν

ἀνὰ ἔτος ἐς τοῦτο καὶ τῷδε τῷ δαίμονι ἱερὰν κοσμοῦσι, καὶ ταύτῃ πορθμεύουσιν αὐτὸν ἐς Μέμφιν, ἔνθα φίλα τε ἤθη αὐτῷ καὶ τριβαὶ κεχαρισμέναι καὶ ἐνηβητήρια καὶ δρόμοι καὶ κονίστραι καὶ γυμνάσια καὶ θηλειῶν βοῶν ὡραίων οἶκοι οἱονεὶ θάλαμοι, ὅτε ἐθέλοι καὶ ἣν ἐρᾷ θυμὸς ἀναβαίνειν αὐτόν· καὶ φρέαρ καὶ κρήνη ποτίμου νάματος. τοῦτο γὰρ οἵ φασιν οἱ θεραπευταί τε καὶ ἱερεῖς λυσιτελεῖν ἀεὶ Νειλῴου πίνειν κᾆτα πιαίνεσθαι*. καὶ γὰρ γλυκὺ τούτου τοῦ ῥεύματος, καὶ εἰς ὄγκον σαρκοῦν ὄντος ἀγαθοῦ.

Πομπὰς δὲ ἃς πέμπουσι καὶ ἱερουργίας ἐπιτέλουσι τοῦ νέου ὕδατος καὶ δαίμονος τὰ θεοφάνια θύοντες Αἰγύπτιοι, καὶ χορείας (ἃς) χορεύουσι, καὶ θαλίας καὶ πανηγύρεις ἃς ἐπιτελοῦσι, καὶ ὅπως αὐτοῖς καὶ πόλις ἅπασα καὶ κώμη δι' εὐφροσύνης ἔρχεται, μακρὰ ἂν εἴη λέγειν. λέγει (λέγεται) δὲ ἐκεῖνος ἐν ὅτου τῇ ἀγέλῃ τόδε τὸ θεῖον ἐγένετο ζῶον δοκεῖ τε εὐδαίμων εἶναι καὶ ἐστίν· ἄγουσι δὲ Αἰγύπτιοι θαυμαστόν γε αὐτόν.

Μάντις τε ἦν ἄρα ἀγαθὸς ὁ Ἆπις, οὐ καθίζων μὰ Δία κόρας ἢ πρεσβυτέρας γυναῖκας ἐπί τινων τριπόδων, οὐδὲ μὴν πόματος ἱεροῦ ἐμπιπλάς· ἀλλ' ὁ μάντις εὔχεται τῷ θεῷ τοῦ δὲ αὐτοῦ καὶ μαθεῖν ἐθέλει· παῖδες δὲ ἀθύροντες ἔξω καὶ πρὸς ἀλλήλους σκιρτῶντες ἐπίπνοοι γενόμενοι σὺν τῷ ῥυθμῷ αὐτὰ ἕκαστα προλέγουσιν, ὡς εἶναι Σάγραν τὰ λεχθέντα †.

* Plutarch observes, (De Iside et Osiride, v.) Λέγονται δὲ καὶ τὸν Ἆπιν ἐκ φρέατος ἰδίου ποτίζειν (οἱ ἱερεῖς)· τοῦ δὲ Νείλου παντάπασιν ἀπείργειν: the reason being that the water of the Nile had a tendency to make him fat. The text of Ælian is consequently here corrupt. We should read, Τοῦτο γὰρ οὔ φασιν οἱ θεραπευταί τε καὶ ἱερεῖς λυσιτελεῖν ἀεὶ Νειλῴου πίνειν κᾆτα πιαίνεσθαι. The remainder has an appearance of negligence and ἀσυνταξία: which however Ælian is apt to affect on purpose. Καὶ εἰς ὄγκον, κ', τ. λ. should be rendered, "Being good also for making fleshy to bulkiness."

This fattening property of the Nile is attested by Prosper Alpinus from his own experience during a four years' residence in Egypt. Res Ægypti, i. iii. 12, 13.

† That is, ἀληθέστερα τῶν ἐπὶ Σάγρᾳ: a Greek proverb, founded on the fact that the victory of the Locri Epizephyrii over the people of Crotona in Italy was heard of at Sparta the same day. See Suidas in ἀληθέστερα τῶν ἐπὶ Σάγρᾳ, and the Parœmiographi Græci.

This μαντεία of the Apis is alluded to by Dio Chrysostom, xxxii. tom. i. 660. 35. 40: Ἴστε δήπου τὰς τοῦ Ἄπιδος φήμας ἐνθάδε ἐν Μέμφει πλησίον ὑμῶν, (he is speaking to the people of Alexandria,) ὅτι παῖδες ἀπαγγέλλοντες παίζουσι τὸ δοκοῦν τῷ θεῷ καὶ τοῦτο ἀψευδὲς πέφυκεν. Cf. Plutarch, de Iside et Osiride, xiv. It is described by Pausanias as the same with that of Mercury, at Pharæ in Achaia, vii. xxii. 2: Τοιαύτη καὶ Αἰγυπτίοις ἑτέρα

Εἰκάζουσι δὲ ἄρα καὶ τῷ Ὥρῳ αὐτὸν Αἰγύπτιοι, ὅνπερ οὖν πεπιστεύκασι φορᾶς καρπῶν καὶ εὐετηρίας αἰτιώτατον ἁπάσης. ἔνθεν τοι καὶ ὑπὲρ τῆς πολυχροίας αὐτοῦ φιλοσοφοῦσι, τὸ ποικίλον τῶν τροπῶν ὑπαινιττόμενοι διὰ συμβόλων. λέγει δέ τις τῶν προφητῶν λόγος οὐ πᾶσιν ἔκπυστος, ὅτι ἄρα ὁ τῶν Αἰγυπτίων βασιλεὺς ἐπενόησε ζῷον ὥστε σέβειν ἔμψυχον, εἶτα μέντοι προείλετο ταῦρον, ἁπάντων ὡραιότατον εἶναι πεπιστευκώς· καὶ τῆς γε Ὁμηρείου κρίσεως τῆς ὑπὲρ τούτων κατ' ἴχνια ἰὼν ὁ Μῆνις φασίν· εἰπεῖν γὰρ ἐν Ἰλιάδι καὶ Ὅμηρον·

> ἠΰτε βοῦς ἀγέληφι μέγ' ἔξοχος ἔπλετο πάντων
> ταῦρος· ὁ γάρ τε βόεσσι μεταπρέπει ἀγρομένῃσι.

οἷα δὲ μυθολογίαν ὑπὲρ τούτου τοῦ ζώου ἐκτρέπουσιν Αἰγύπτιοι τῇδε τῇ περὶ ζώων ἀληθείᾳ καὶ ἰδιότητι οἱ τὰ περὶ τῶν ζώων γράψαντες οὔ μοι δοκεῖ φίλα εἶναι*[y].

# CHAPTER II.

## *Remarks on the above Testimonies, and inferences deducible from them.*

### SECTION I.—*The Apis the type of a cycle of some kind.*

IT plainly appears from the above testimonies that though the Apis was reared with all possible care, and treated as long as it lived with the utmost tenderness; and though it was confessedly esteemed to be divine, and was worshipped with more devotion than any other animal in Egypt; yet, if the term of its existence was not anticipated by a natural death, its very guardians and worshippers before were bound to cut short its life at last; both the time and the manner of doing this being unalterably fixed and prescribed. Now it is not conceivable that such should ever have been the final disposal

περὶ τοῦ Ἄπιδος τὸ ἱερὸν μαντεία καθέστηκε. The manner at Pharæ was for the party consulting the oracle to put down a piece of money on the altar to the right: then to approach the image of Mercury and whisper in its ear: afterwards to leave the Agora, stopping his ears, but opening them as soon as he got outside. The first words, or first sounds, which he then heard, were the answer.

[y] Ælian, De Natura Anim. xi. 10. The last sentence appears to be corrupt. The sense seems to require: Οἷα δὲ μυθολογίαν τὴν περὶ τούτου τοῦ ζώου ἐκτρέπουσιν Αἰγυπτίων οἱ τὰ περὶ τῶν ζώων γράψαντες, τῇδε τῇ περὶ τούτων ἀληθείᾳ καὶ ἰδιότητι οὔ μοι δοκεῖ φίλα εἶναι.

of an object of worship, or even of an animal so differently treated until then, if it was not the type or representation of something, the duration of which was fixed; of something which could not be anticipated before a certain time, nor yet protracted or prolonged beyond it. A cycle or period is of that description. A cycle is something of limited duration, and of perpetual recurrence. It has a beginning and an end of its own, and a proper interval from one to the other, which is the measure of its proper period; defined and determined by the law of the cycle itself. The first and most obvious inference from the preceding testimonies is *this;* That the Egyptian Apis must have been the representative of a cycle of some kind: and that the length of its life, the measure of the existence which it might attain to but could not pass, must have been the period of this cycle.

### SECTION II.—*The Apis the type of a cycle of* 25 *years.*

It seems to have been known to Herodotus, the oldest of the above authorities, that the Egyptian Apis, or Epaphus, (as he appears to have called it,) was liable to disappear at stated times, and to reappear at stated times: and that his disappearance was a cause of grief, his reappearance a cause of joy, to the Egyptians at large: but what these stated times were, and whether there was any fixed interval of duration between the first appearance of one Apis and that of the next, he does not seem to have known: at least he has not told us.

The same observation may be made on the testimony of Pliny, though so much later than that of Herodotus. He too was aware that the Apis could not live longer than a certain time, though what that time was he does not appear to have known. Solinus has apparently copied from Pliny; Ammianus seems to have had his eye on both: and though each of them may vary the statements of Pliny in words, neither adds any thing to the substance of his testimony on this one point at least, the stated duration of the life of the Apis.

It might perhaps be conjectured from Horapollo[z], that the Egyptians must have had a cycle among them, which ad-

[z] Horapollo, i. 5. Cf. Herod. ii. 168.

mitted of being symbolized by the fourth part of an aroura, (100 cubits ;) consequently a cycle of 25 terms of some kind. It appears too from the tables of Ptolemy and Theon, that the natural lunar cycle of the equable solar year was a cycle of 25 years, an *εἰκοσιπεντετηρίς*. But there is nothing apparently in either of these coincidences to identify this cycle with the life of the Apis ; or to designate the Apis as the type of that particular cycle. This must be done, if at all, by the help of testimonies not yet produced.

Now there is a passage of Lucan, not yet cited, which will throw the first light on each of these points, and will supply the clue to the discovery of the cycle of which we are in quest. He is describing Achoreus, chief of the priests of the Apis itself ; one of the persons supposed to be present at the deliberations of Ptolemy respecting the reception and treatment of Pompey.

> . . . Quos inter Achoreus
> Jam placidus senio, fractisque modestior annis.
> Hunc genuit custos Nili[a] crescentis in arva
> Memphis vana sacris : illo cultore deorum
> Lustra suæ Phœbes non unus vixerat Apis[b].

The proper sense of lustrum in the Latin language was that of a period of five years *complete*. If Lucan therefore was speaking advisedly when he spoke of the life of the Apis as measured by *lustra*, he must have known that it was measured or measurable in some manner or other by the period of *five years* : and it must further be inferred from his language,

> Lustra suæ Phœbes non unus vixerat Apis,

that he knew this proper measure of the life of the Apis to be a lunar period of some kind or other ; that each Apis had his proper moon with which his own existence was inseparably connected ; and that both this moon, and the proper existence of its proper Apis, commensurate with it, were cycles of Roman lustra, in the sense of periods of five years of some kind or other.

There is also a passage of Plutarch, not yet produced,

[a] The Nilometer was kept at Memphis.

[b] Pharsalia, viii. 478. Achoreus is again mentioned as one of the guests at the banquet afterwards given to Julius Cæsar by Cleopatra : x. 175–193, sqq.

which explains this allusion in Lucan, and shews the inference founded upon it to be just; both defining the length of the life of the Apis, and shewing it to have been actually commensurate with a cycle which was a multiple of the Roman lustrum: Ποιεῖ δὲ τετράγωνον ἡ πεντὰς ἀφ' ἑαυτῆς, ὅσον τῶν γραμμάτων παρ' Αἰγυπτίοις τὸ πλῆθός ἐστι, καὶ ὅσον ἐνιαυτῶν ἔζη χρόνον ὁ Ἆπις[c]. This leaves no doubt that the length of the life of the Apis was the square of 5: i. e. 25 years: consequently a measure of the Roman lustral period of five years, which entered the life of the same Apis five times over*.

* In the Dionysiaca of Nonnus, an Egyptian Greek, a native of Panopolis, there is an allusion to this Apis period of 25 years in an enigmatical, but still an intelligible, way; both as a lunæsolar period, and as a *μέτρον ἀρούρης*, (which it entered four times,) and as a multiple of the number of fingers on one of the human hands, which it measured five times. He is speaking of Cadmus, as the author of the introduction of letters among the Greeks, and of other discoveries of art or science; but as borrowed from the Egyptians:

Αὐτὰρ ὁ πάσῃ
Ἑλλάδι φωνήεντα καὶ ἔμφρονα δῶρα κομίζων
γλώσσης ὄργανα τεῦξεν ὁμόθροα· συμφυέος δὲ
ἁρμονίης στοιχηδὸν ἐς ἄζυγα (vowels) σύζυγα (consonants) μίξας
γραπτὸν ἀσιγήτοιο τύπον τορνώσατο σιγῆς,
πάτρια θεσπεσίης δεδαημένος ὄργια τέχνης
Αἰγυπτίης σοφίης μετανάστιος, ἦμος Ἀγήνωρ
Μέμφιδος ἐνναέτης ἑκατόμπυλον ᾤκισε Θήβην.
καὶ ζαθέων ἄρρητον ἀμελγόμενος γάλα βίβλων
χειρὸς ὀπισθοπόροιο χαράγματα λοξὰ χαράσσων
ἔγραφεν ἄγκυλα κύκλα· καὶ Αἰγυπτίου Διονύσου
εὔϊα φοιτητῆρος Ὀσίριδος ὄργια φαίνων
μυστίδος ἐννυχίας τελετὰς ἐδιδάσκετο τέχνης,
καὶ κρυφίῃ μάγον ὕμνον ἀνέκλαγε θυιάδι φωνῇ
λεπτὸν ἔχων ὀλόλυγμα· λιθοξοάνοιο δὲ νηοῦ
γλυπτὰ βαθυνομένῳ κεχαραγμένα δαίδαλα τοίχῳ
κουρίζων δεδάηκε· πολυφράστῳ δὲ μενοινῇ
μετρήσας φλογόεσσαν ἀνηρίθμων ἴτυν ἄστρων,
καὶ δρόμον ἠελίοιο μαθὼν καὶ μέτρον ἀρούρης,
χειρὸς εὐστροφάλιγγος ὁμόπλοκα δάκτυλα κάμψας
ἄστατα κύκλα νόησε παλιννόστοιο Σελήνης·
πῶς τρισσαῖς ἑλίκεσσι μετάτροπον εἶδος ἀμείβει,
ἀμφιφαὴς διχόμηνις ὅλῳ στίλβουσα προσώπῳ·
πῶς δὲ συναπτομένη καὶ ἀπόρρυτος ἄρσενι πυρσῷ

[c] De Iside et Osiride, lvi.

## SECTION III.—*The Apis the type of a lunar and solar cycle of 25 years.*

The fact having been ascertained that the duration of the life of the Apis was a period of twenty-five years, it serves to explain one of its marks, the first which was specified by Herodotus; viz. the white square on its forehead. The colour of this square perhaps was of no importance, except to render the symbol so much the more distinct, and to contrast it with the rest of the body of the Apis; which both Herodotus and others of our authorities who had seen the Apis with their own eyes, expressly declare to have been *black*. But the figure was doubtless significant: and its final end must now appear to have been that of purposely symbolizing by the four sides of this mystical square the appointed duration of the life of the Apis: for each of these being assumed =5, the rectangle or square of the whole was 25. It follows that the life of the Apis was a period of 25 years: and if its existence was commensurate with the duration of a cycle, that cycle also was one of 25 years.

But the question presents itself here, whether these 25 years were 25 solar or 25 lunar years, or one as much as the other; that is, 25 lunæsolar years? The testimony of Lucan implies the former; that of Plutarch, the latter: for in references to *years* absolutely, such as his, solar not lunar years are always first and properly to be understood. Again, most of the testimonies produced above speak of the Apis as sacred to the *moon;* especially in contradistinction to the Mneuis, which it is agreed was sacred to the sun. Yet on the other hand it is an undeniable fact that the Apis was always represented in the form of a bull: and it is equally certain that the bull from time immemorial in the person of

ἠελίου γενετῆρος ἀμήτορι τίκτεται αἴγλῃ,
πατρὸς ὑποκλέπτουσα παλιμφυὲς αὐτόγονον πῦρ.
Lib. iv. 259.

There is a similar reference to this property of the cycle, of being *told on the fingers backwards and forwards,* in connection with Endymion, and through him too with the moon.

Καὶ σοφὸς Ἐνδυμίων ἑτερότροπα δάκτυλα κάμψας
γνώσεται ἄστατα κύκλα παλιννόστοιο Σελήνης.
xli. 379.

the Mneuis had been appropriated to the sun. Add to this that Plutarch, (one of the best informed of our ancient authorities on these subjects in general,) as we shall see hereafter, gives us to understand that some of the Egyptians themselves looked on the Apis as the offspring of the Mneuis: one opinion among the Egyptians themselves made the Mneuis the father of the Apis. The meaning of this, in reality, is simply that the Mneuis was older than the Apis; and that the first idea of the Apis itself was taken from the Mneuis: and the Apis inheriting his sex and representing his likeness in other respects inherited also his relation to the sun. Accordingly it appears already from some of our testimonies, and it will further appear from others not yet produced, that the Apis was supposed to be animated by Osiris; the Apis was an incarnation of Osiris; the body of the Apis served as a visible habitation, or as a sensible representation, of the soul of Osiris, and of the principle of divinity inherent in that: and we shall see hereafter that according to one of the constructions of the nature and idea of Osiris himself he passed for the sun; as Isis, on the other hand, did for the moon. There might be an apparent natural fitness in the male of any animal to typify or represent the sun, and in the female corresponding to it to symbolize and personify the moon: and as it is notorious that Isis among the Egyptians, even in her proper relation to Osiris, was typified by the cow, what could be the corresponding type of Osiris in the same relation except the bull?

These reasons in our opinion are decisive that the Apis even as the type of a cycle must have been first and properly the type of a solar cycle; and yet the testimony of antiquity is clear and positive that the Apis was sacred to the moon, and that it had as much to do with the moon as with the sun. There is no mode of reconciling one of these facts to the other, except by supposing that it was in reality the type of a cycle which was as much lunar as solar, and as much solar as lunar, that is, strictly lunæsolar; with this possible difference only, that in this solar and lunar cycle, composed of two distinct elements yet represented by one type in the Apis, the solar element was the more important of the two; the lunar must have been dependent on the

solar, but the solar was not dependent on the lunar. And this was strictly the case, as we shall see, with that particular lunæsolar cycle which we have called the Apis cycle, and with the relation of the two parts of which it consisted one to the other.

### SECTION IV.—*Confirmation of the above conclusion by other marks of the Apis.*

The conclusion at which we have thus arrived enables us to assign a meaning to the only two other marks of the Apis which are mentioned by Herodotus in particular; the eagle upon the back, and the beetle under the tongue. The positions of these characteristic marks were no doubt significant of something or other; but the symbol itself is the first thing to be considered: and the meaning of the symbol being discovered, it will probably explain its position.

Among the hieroglyphical symbols taken from birds, enumerated and explained by Horapollo, that of the eagle does not occur. We cannot doubt however that this symbol also was used hieroglyphically in Egypt; especially as it may be collected from Diodorus[d] and Strabo[e] that at Thebes in particular it was both sacred to Ammon Ra or the sun, and typical of the sun. There were many properties, peculiarly characteristic of this bird and known to the ancients, which qualified it to be an appropriate type of the sun. It is agreed at least that the hawk was eminently symbolical of the sun[f]: and there was just as much reason in the nature of things why the eagle should be so, as the hawk.

Modern writers on these subjects affirm that Herodotus mistook the symbol on the back of the Apis; and that it was in reality a vulture, not an eagle[g]. But with respect to a point so notorious, of which any one who had seen the Apis must have been competent to judge for himself, we cannot

[d] i. 87.

[e] Strabo, xvii. i.

[f] Horapollo, i. 8: *Διὰ τοῦτο καὶ ἡλίῳ τὸν ἱέρακα ἀνέθεσαν, παραπλησίως γὰρ τῷ ἡλίῳ τὸν τριάκοντα ἀριθμὸν ἐν τῷ πλησιασμῷ τῆς θηλείας ἀποδίδωσιν*— i. 6: *Θεὸν βουλόμενοι σημῆναι . . . ἱέρακα ζωγραφοῦσι. θεὸν μὲν . . . ἐπεὶ καὶ δοκεῖ εἴδωλον ἡλίου ὑπάρχειν, παρὰ πάντα τὰ πετεινὰ πρὸς τὰς αὐτοῦ ἀκτῖνας ὀξυωποῦν . . . ὅθεν καὶ τὸν ἥλιον ὡς κύριον ὄντα ὁράσεως ἔσθ' ὅτε ἱερακόμορφον ζωγραφοῦσι.* Cf. Clem. Alex. Strom. v. vii. § 42. p. 31. l. 21. Plutarch, De Iside et Osiride, xxxii. Ælian, De Nat. An. vii. 19: x. 14. 24.

[g] Sir Gardiner Wilkinson, Manners and Customs, 2nd series, i. xiii. 349. 450.

believe that Herodotus could have been misinformed, if he did not speak even from his own observation; as in reality in his description of the Apis he seems to have done. It does not appear, so far as we know, that there is any better authority for questioning the accuracy of his description in this one particular, than certain bronze figures of the Apis still in existence[h]; on the back of which the figure represented is that of a vulture not of an eagle. But we have no voucher for the antiquity, or even the genuineness, of these bronzes. Nor could any one undertake to say that the symbol on the back of the Apis (which we may take it for granted in itself represented neither an eagle nor a vulture, but just what the priests chose it should) must necessarily always have been explained in the same way; and might not be interpreted of an eagle at one time and of a vulture at another, or made to resemble an eagle at one time and a vulture at another. This would not be the only instance in which the hieroglyphical symbols of one time, to suit a particular purpose, were modified, and commuted for those of another.

On this question however of the relation of the Apis to the sun, it makes little difference whether the figure on the back was an eagle or a vulture; nor should we have thought it worth while to dispute this point at all, were it not that the modern school of Egyptian antiquarians displays in our opinion on all occasions too great a disposition to disparage the testimony of the ancients to such points as these, even when it is that of contemporaries and of eyewitnesses; and to rely implicitly on the authority of the monuments and sculptures, the good faith and credibility of which there is only too much reason to question. We are told however[i] that the vulture was the hieroglyphical symbol of the upper hemisphere; and the oldest and most appropriate type of that kind: and this is that part of the heavens in which alone the sun is visible to the inhabitants of the upper hemisphere; and which consequently to them appears to be its sole and exclusive habitation. The vulture on the back of the Apis would thus connect it with the upper hemisphere,

[h] Cf. Ibid. ii. xiv. 115.

[i] Birch's Egyptian Antiquities in the British Museum, p. 4.

and through that with the sun: and it might be placed there, in the most conspicuous situation on the body of the animal, to connect the sun the more directly with the true sphere of its presence and visibility.

With regard to the beetle; Horapollo explains the hieroglyphical meaning of this symbol at great length[k]: *Μονογενὲς δὲ δηλοῦντες, ἢ γένεσιν ἢ πατέρα ἢ κόσμον ἢ ἄνδρα, κάνθαρον ζωγραφοῦσι. μονογενὲς μὲν ὅτι αὐτογενές ἐστι τὸ ζῶον ὑπὸ θηλείας μὴ κυοφορούμενον.* If this notion concerning the beetle was currently entertained in Egypt, there could not be a more appropriate emblem of the Apis, as *μονογενές τι* and *αὐτογενές τι* also; the former as the only individual of its kind which existed, or could exist, at a particular time, the latter as generated by a direct emanation from some other quarter, without the intervention of any natural means whatsoever.

Horapollo proceeds to explain this peculiar generation of the beetle: and though he himself may be comparatively modern, the explanation must have been ancient, since it occurs in Clemens Alexandrinus also; from whom we shall quote it at present, in preference to Horapollo: *Τὰ μὲν γὰρ τῶν ἄλλων ἄστρων, διὰ τὴν πορείαν τὴν λοξὴν, ὄφεων σώμασιν ἀπείκαζον, τὸν δὲ ἥλιον τῷ τοῦ κανθάρου, ἐπειδὴ κυκλοτερὲς ἐκ τῆς βοείας ὄνθου σχῆμα πλασάμενος ἀντιπρόσωπος κυλινδεῖ. φασὶ δὲ καὶ ἑξάμηνον μὲν ὑπὸ γῆς θάτερον δὲ τοῦ ἔτους τμῆμα τὸ ζῶον τοῦτο ὑπὲρ γῆς διαιτᾶσθαι, σπερμαίνειν τε εἰς τὴν σφαῖραν καὶ γεννᾷν, καὶ θῆλυν κάνθαρον μὴ γίνεσθαι*[l]. It appears also in Porphyry: *Κάνθαρον δὲ ἀμαθὴς βδελυχθείη ἂν, ἀγνώμων ὑπάρχων τῶν θείων. Αἰγύπτιοι δὲ ἐσέφθησαν ὡς εἰκόνα ἡλίου ἔμψυχον. κάνθαρος γὰρ πᾶς ἄρρην, καὶ ἀφιεὶς τὸν θορὸν ἐν τέλματι καὶ ποιήσας σφαιροειδῆ τοῖς ὀπισθίοις ἀνταναφέρει ποσὶν, ὡς ἥλιος οὐρανὸν, καὶ περίοδον ἡμερῶν ἐκδέχεται εἰκοσιοκτὼ σεληνιακήν*[m]. In part also it appears in Plutarch: *Τοῖς δὲ μαχίμοις κάνθαρος ἦν γλυφὴ σφραγῖδος. οὐ γάρ ἐστι κάνθαρος θῆλυς, ἀλλὰ πάντες ἄρσενες. τίκτουσι δὲ τὸν γόνον, ὃν σφαιροποιοῦσιν, κ', τ. λ.*[n]

The scarabæus was consequently a type of the sun. It is observable however that, according to Clemens Alexandrinus[l],

[k] i. 10.
[l] Stromata, v. iv. § 21. p. 17. l. 14.
[m] De Abstinentia, iv. 9. 327. Cf. Ælian, De Animal. x. 15. Eusebius, Præp. Evang. iii. 5. 203, 13. 14.
[n] De Iside et Osiride, x. Cf. lxxiv. Ælian, De Natura Anim. x. 15. Scholia ad Aristophanem, Pax, 7. 81.

it had also the power of denoting the lower hemisphere. We find it accordingly on the zodiacs of Egypt, associated with the tropic of Cancer; at which the sun actually passes from the upper to the lower hemisphere. The vulture or the eagle therefore on the back of the Apis, standing for the upper hemisphere, the scarabæus under the tongue probably stood for the lower, and probably was placed there, because it did: for the lower hemisphere, in comparison of the upper, is the unseen or invisible one. And this mark under the tongue, which Pliny the Elder describes as nodus sub lingua, would be unseen too.

We learn however from Horapollo that there were different kinds of symbolical beetles, and that all of them were not sacred to the sun; one at least was sacred to the moon. *Εἰσὶ δὲ καὶ κανθάρων ἰδέαι τρεῖς· πρώτη μὲν αἰλουρόμορφος καὶ ἀκτινωτὴ, ἥνπερ καὶ ἡλίῳ ἀνέθεσαν διὰ τὸ σύμβολον. φασὶ γὰρ τὸν ἄρρενα αἴλουρον συμμεταβάλλειν τὰς κόρας τοῖς τοῦ ἡλίου δρόμοις· ὑπεκτείνονται μὲν γὰρ κατὰ πρωῒ πρὸς τὴν τοῦ θεοῦ ἀνατολήν· στρογγυλοειδεῖς δὲ γίνονται κατὰ τὸ μέσον τῆς ἡμέρας· ἀμαυρότεραι δὲ φαίνονται δύνειν μέλλοντος τοῦ ἡλίου. ὅθεν καὶ τὸ ἐν Ἡλίου πόλει ξόανον τοῦ θεοῦ αἰλουρόμορφον ὑπάρχει. ἔχει δὲ πᾶς κάνθαρος καὶ δακτύλους τριάκοντα διὰ τὴν τριακονταήμερον*[o] *τοῦ μηνὸς, ἐν αἷς ὁ ἥλιος ἀνατέλλων τὸν ἑαυτοῦ ποιεῖται δρόμον. δευτέρα δὲ γενεὰ ἡ δίκερως καὶ ταυροειδὴς, ἥτις καὶ τῇ σελήνῃ καθιερώθη. . . . τρίτη δὲ ἡ μονόκερως καὶ ἰδιόμορφος, ἣν Ἑρμῇ διαφέρειν ἐνόμισαν, καθάπερ καὶ Ἶβιν τὸ ὀρνέον*[p].

This second kind of scarabæus was probably consecrated to the moon from the resemblance of its two horns to those of the moon, at the first phasis and at the last; the third to Hermes or Thoth from the likeness of its one horn to the peculiar mode of representing him; by virtue of which, instead of the human head, he appears with the head or beak of the ibis; and so was both *μονόκερως* and *ἰδιόμορφος*. This kind of beetle, with two horns resembling the lunar crescent, having been appropriated to the moon also because of its likeness to a bull; that was, in other words, because of its similitude to the Apis. The bull Apis therefore was equally sacred to the sun and to the moon. Consequently it

[o] The sense requires *κατὰ τὰς τριάκοντα ἡμέρας τοῦ μηνός*: unless something has been lost out of the text.

[p] i. 10.

was equally connected with a solar and with a lunar cycle: that is, it was the representative of a strictly lunæsolar cycle.

## SECTION V.—*On the lunar cycle of the equable solar year.*

If there is any mystery or any seeming inconsistency in this double relation of the same animal, both to the sun and to the moon at once, it is explained by that property of the equable solar year, to which we have more that once had occasion to advert in the course of this present work, but of which we have never yet given a particular account.

This primitive form of the solar year, as we have often observed, is distinguished by a kind of relation to the lunar, which characterises no form of the solar year besides, not even the mean Julian. By virtue of this relation the solar reckoning of annual time is more easily, more completely, and more continually equated to the lunar reckoning of annual time, than in any other instance whatsoever. Twenty-five solar years, each 365 days in length, contain 9125 solar days: 309 mean lunations, of any standard which could be assumed, could not contain less than 9124 days, and nearly 23 hours of one more.

Thus, to adopt the mean lunar standard of our own Fasti.

| | | d. | h. | m. | s. | th. |
|---|---|---|---|---|---|---|
| 300 lunations | = | 8,859 | 4 | 12 | 45 | 57·447 |
| 9 | = | 265 | 18 | 36 | 22 | 58·723 |
| 309 | = | 9,124 | 22 | 49 | 8 | 56·170 |

| | | d. | h. | m. | s. | th. |
|---|---|---|---|---|---|---|
| 365 d. × 25 | = | 9,125 | 0 | 0 | 0 | 0·0 |
| 309 lunations, | = | 9,124 | 22 | 49 | 8 | 56·17. |
| Defect | = | | 1 | 10 | 51 | 3·83. |

With a greater standard of the mean lunation than that of our Fasti, this difference would be proportionably less. A difference of one second would reduce it to 1 h. 5 m. 42 s. 3 th.· 83: and a difference of two seconds to 1 h. 0 m. 33 s. 3 th.· 83. And there can be no doubt that the mean lunar standard, at the beginning of lunar time itself in connection with the present system of things, was nearly 2 seconds greater

than that of our Fasti[q]. The above however is sufficient to shew that the natural lunar cycle of the primitive solar year was 25 years, 309 mean lunar months: and that at the end of 25 such years, 309 such months, 9125 mean solar days, the sun and the moon both would and must return to the same state of relation one to the other in which they might have set out at the beginning.

### Section VI.—*On the construction of the Apis cycle: i. e. of the perpetual type of such a cycle.*

It is another remarkable and almost exclusive property of this primitive solar and lunar cycle, that solar and lunar time, each measured perpetually by the period of 24 hours of mean solar time, admit of being adjusted one to the other, through the whole of one of these common periods of 25 years, with less trouble, with more facility, yet with greater correspondency both to the truth and to each other, than in any other kind of lunæsolar cycle besides. All others indeed aim at effecting this; and all others profess to effect it also; and all, it must be admitted, do effect it in one manner or other: but none so easily as this, none so completely as this; none without a great deal more of art and contrivance, and a much greater complication of rules and multiplicity of details, than this.

In this lunæsolar cycle one rule only is necessary to regulate the succession of the months, viz. that they should consist of 30 days and 29 alternately; excepting only those cases, which we shall presently specify, where the intercalary rule of the cycle steps in to modify this general one, and to make a month of 29 days a month of 30. And no calendar lunar month, it is evident, in order to preserve a due relation and equality to the month of nature, ought ever to contain more than 30 integral periods of 24 hours, or less than 29. And one rule only in like manner is necessary to regulate the length of the year in this cycle. Every year must consist of 354 periods of 24 hours, or of 355, perpetually; but of neither more than the latter nor of less than the former. And the former of these is the least number of integral

q See supra p. 26, Diss. IX. ch. I. sect. vii. Art. v.

periods of 24 hours, which ought to enter into 12 natural lunar months in sequence; the former is the greatest which can do so, even when the excess of 12 natural lunar months over 12 calendar months, such as we began with defining, is taken into the account, in the shape of the intercalary day.

These two rules are all which a lunæsolar calendar of this kind constantly requires; these are sufficient for it perpetually. These continuing invariable, and being constantly respected, every thing else is mere matter of detail, and affects not the principle of the rules but the application. It is easy to shew the sufficiency of these two rules for the perpetual equation of solar and lunar time in the cycle in question.

| | | |
|---|---|---|
| 154 lunations of 30 days - - - | = | 4620d. |
| 154 lunations of 29 days - - - | = | 4466 |
| 308 lunations of 30 and 29 days alternately | = | 9086 |
| 1 lunation of 30 days - - - | = | 30 |
| 309 lunations, alternately 30 and 29 days long | = | 9116 |
| | | +9 |
| | | 9125 |

It is evident then that 309 lunations, running on in sequence one after another and 30 and 29 days long alternately, would fall short of the number of periods of 24 hours (that is, mean solar days) in 25 equable years by *nine* days. Nothing then can be more unquestionable than that, in a lunæsolar cycle of this kind, nine intercalary days must be wanted; and nothing more reasonable or more unobjectionable than that nine should be supplied. In this case it is evident that some nine months must be months of 30 days each, which would otherwise be months of 29. The only question will be, What nine months? and in what years of the cycle, and whereabouts in those years themselves?

Now did 12 mean natural lunations contain 354 days eight hours of mean solar time exactly, this question would soon be decided. These eight hours would accumulate to a day and a night complete (24 hours of mean solar time exactly) at the end of every three years of the cycle. Therefore the intercalary day would be wanted every three years; and its proper place would be at the end of the third year, and at

the end of the last month of that year; which, though ordinarily a month of 29 days, in this case would become one of 30. And though 12 natural lunations in sequence do in reality contain 48m. 30s. 38th. of mean time at least more than 354d. 8h.; yet since this is comparatively a small excess for any one year, and it must of necessity stand over until it accumulates to a day and a night, or to the principal part of a day and a night; it is manifest that the intercalary rule of the cycle must begin with being accommodated to the above hypothesis, of every 12 natural lunations consisting of 354 days 8 hours only; and therefore must be such as we have supposed.

On this principle the natural seat of the seventh intercalation would be the end of the 21st year of the cycle. At this time however it is necessary to take into account the outstanding difference of 48m. 30s. 38th., which has been lying by hitherto: and first of all to see what it amounts to.

| | | | | | | |
|---|---|---|---|---|---|---|
| Now 48m. × 21 = | 1008m. = | 16h. | 48m. | 0s. | 0th. |
| 30s. × 21 = | 630s. = | | 10m. | 30s. | 0th. |
| 38th. × 21 = | 798th. = | | | 13s. | 18th. |
| 48m. 30sec. 38th. × 21 = | | 16h. | 58m. | 43s. | 18th. |

This difference therefore, at the end of the 21st year of the cycle, is found to have accumulated to 16h. 58m. 43s. 18th.; that is, to two thirds and upwards of an entire period of 24 hours. At the end of the 22nd year it will be found to be further increased by 8h. 48m. 30s. 38th. more; that is, it will be found to amount to 1h. 47m. 13s. 56th. more than 24 hours themselves.

It is manifest therefore that the natural seat of the eighth intercalary day must be the end of the 22nd year of the cycle, and at the end of the 12th month of that year as before; even though it should be a necessary consequence of that fact, that two years of the cycle, the 21st and the 22nd, must both be intercalary alike. The seat of the ninth will consequently be the end of the 25th year, and at the end of the 12th month of that year: and, at the end of this year and of this month of that year, the balance of mean natural lunar time and of calendar or cyclical lunar time will stand as follows:

| | h. | m. | s. | th. |
|---|---|---|---|---|
| Remaining at the end of the 22nd year, in mean natural lunar time - - - | 1 | 47 | 13 | 56 |
| Accumulated in addition at the end of the 25th, 48m. 30s. 38th. × 3 - - | 2 | 25 | 31 | 54 |
| | 4 | 12 | 45 | 50 |

But, even at the end of the 25th year, there are still nine months wanting to complete the entire number of 309; each of which in the calendar reckoning will consist of 30 days and 29 days alternately; that is, each will be reckoned at 29 d. 12 h. apiece. But each natural month contains 44 m. 2 s. 33 th. at least more than this.

Therefore the balance at the end of these nine months will stand as follows:

| | h. | m. | s. | th. |
|---|---|---|---|---|
| Remaining at the end of the 25th year, in mean natural lunar time - - - | 4 | 12 | 45 | 50 |
| Accumulated at the end of the next nine months, 44 m. 2 s. 33 th. × 9 - -= | 6 | 36 | 22 | 57 |
| | 10 | 49 | 8 | 47 |

To meet this, we give 12 hours more than the mean calendar standard of 29 d. 12 h. to the last month of the nine; that is, we make it a month of 30 days instead of 29: so that the balance finally stands as follows:

| | h. | m. | s. | th. |
|---|---|---|---|---|
| Excess of mean calendar time at the end of 309 lunations - - - - | 12 | 0 | 0 | 0 |
| Excess of natural at the end of the same | 10 | 49 | 8 | 47 |
| Defect at the end of the cycle - - | 1 | 10 | 51 | 13 |

The true difference, as we began with shewing, and with the mean natural standard of our Fasti, is 1 h. 10 m. 51 sec. 3th.·83. But in the preceding calculation we have neglected the fractional part lower than thirds; and that explains this seeming discrepancy.

SECTION VII.—*Type of the Apis cycle; or scheme of the lunar and solar ἀποκατάστασις, in the equable year, from the 1st of Thoth in the first such year to the 1st of Thoth in the 26th.*

*Type of the Apis Cycle, &c.*

| Solar Cycle. | Lunar Cycle. | | Epact | Sum of days. | Intercalary lunation. |
|---|---|---|---|---|---|
| i | i | Thoth 1 | 0 | 354 | |
| i | ii | Mesore 25 | 11 | 354 | |
| ii | *iii | Mesore 14 | 11 | 355 | xxxvi |
| iii | iv | Mesore 4 | 10 | 354 | |
| iv | v | Epiphi 23 | 11 | 354 | |
| v | *vi | Epiphi 12 | 11 | 355 | lxxii |
| vi | vii | Epiphi 2 | 10 | 354 | |
| vii | viii | Paüni 21 | 11 | 354 | |
| viii | *ix | Paüni 10 | 11 | 355 | cviii |
| ix | x | Pachon 30 | 10 | 354 | |
| x | xi | Pachon 19 | 11 | 354 | |
| xi | *xii | Pachon 8 | 11 | 355 | cxliv |
| xii | xiii | Pharmuthi 28 | 10 | 354 | |
| xiii | xiv | Pharmuthi 17 | 11 | 354 | |
| xiv | *xv | Pharmuthi 6 | 11 | 355 | clxxx |
| xv | xvi | Phamenoth 26 | 10 | 354 | |
| xvi | xvii | Phamenoth 15 | 11 | 354 | |
| xvii | *xviii | Phamenoth 4 | 11 | 355 | ccxvi |
| xviii | xix | Mecheir 24 | 10 | 354 | |
| xix | xx | Mecheir 13 | 11 | 354 | |
| xx | *xxi | Mecheir 2 | 11 | 355 | cclii |
| xxi | *xxii | Tybi 22 | 10 | 355 | cclxiv |
| xxii | xxiii | Tybi 12 | 10 | 354 | |
| xxiii | xxiv | Tybi 1 | 11 | 354 | |
| xxiv | *xxv | Chœac 20 | 11 | 355 | ccc |
| xxv | xxvi | Chœac 10 | 10 | 266 | |

*Last nine months of the cycle.*

| Month. | Days. | | Lunation. |
|---|---|---|---|
| i | 30 | Chœac 10 | ccci |
| ii | 29 | Tybi 10 | cccii |
| iii | 30 | Mecheir 9 | ccciii |
| iv | 29 | Phamenoth 9 | ccciv |
| v | 30 | Pharmuthi 8 | cccv |
| vi | 29 | Pachon 8 | cccvi |
| vii | 30 | Paüni 7 | cccvii |
| viii | 29 | Epiphi 7 | cccviii |
| ix | 30 | Mesore 6 | cccix |
| i | 30 | Thoth 1 | i |

That such a type or such a scheme as the above has been actually transmitted from antiquity to our own times in any quarter of the world is more than we can venture to say: but that it is the natural scheme and natural representation of two such things as equable solar and equable lunar time in conjunction, after what has been explained, we do not

hesitate to say. We shall see it confirmed in due time by the actual testimony of the oldest calendar of this kind with which we are acquainted, the Egyptian; and by every other, of later date than that yet agreeing in principle with it and similarly administered, which has come to our knowledge also.

That this property of the equable solar year must have been known to the Egyptians from the time of the introduction of the worship of the Apis among them, (if not from a much earlier period,) after what has been proved of the relation of the Apis in particular to this cycle, no one can entertain a doubt. It is not without reason therefore that modern chronologers have given it the name of the Apis cycle. Yet there is no ancient authority for this name. In the allusions to it of the astronomers or of the mathematicians of old, it is simply the *εἰκοσιπεντετηρίς*. Vettius Valens, an unedited astrological writer, speaks of the period of 25 years as the natural period of the moon, just as much as of that of 30 years as the period of Saturn[r]. It entered into the *κυνικὸς κύκλος* of the old Egyptian chronicle, quoted by Syncellus[s], along with the measure of the Sothiacal period, 1461 equable years; both together making up the number of 36,525, the supposed length of that cycle. It may be discovered in some of the fabulous periods of Manetho, even as corrected by the Chevalier Bunsen; who does not seem to have suspected that fact. We may infer that Lucian must have been well aware of it; the particular duration of the peculiar punishment, which he supposes to await the rich after their death in another state of existence, being 10,000 years multiplied by 25, the Apis cycle: *Ἄχρις ἂν ἐν τῷ τοιούτῳ διαγάγωσι μυριάδας ἐτῶν πέντε καὶ εἴκοσιν ὄνοι ἐξ ὄνων γιγνόμενοι, καὶ ἀχθοφοροῦντες καὶ ὑπὸ τῶν πενήτων ἐλαυνόμενοι*[t]. There could be no longer any mystery about it from the time when it came to be applied even among Christians to the regulation of the services of the church itself: which, as we have already observed[u], was the case in

r Lib. iii. p. 60. *Περὶ κλήρου τύχης.* Cf. p. 90. (Bodleian Library, Oxon, MSS. 3365.)

s 95. l. 9–97. 16.

t Nekuomanteia, 20. l. 78. Psephisma. Opp. i. 483.

u Supra, vol. i. 100. Diss. iii. ch. iii. sect. ii.

Armenia at least, soon after the conversion of the nation, about the middle of the fourth century: and very possibly in other instances also.

SECTION VIII.—*On the lunar epoch of the Apis cycle of the Egyptians: and whether it was the luna prima, or some later lunar term.*

After the digression into the structure and details of the Apis cycle into which we have been led by the course of our subject; we resume the inquiries on which we were previously engaged. The first question which we have to consider is that of the epoch of the Apis cycle, among the Egyptians at least; by which we mean its *lunar* epoch, or that particular lunar date from which it took its rise.

For with respect to the lunar date of such a cycle as this in general, since the cycle itself is equally well adapted to bring about the restitution of the same lunar to the same solar term, after the lapse of its proper period, under any conceivable circumstances; of all questions connected with such a cycle, that is the most indifferent to the nature and constitution, the use and application of the cycle itself; and the least capable of being decided by considerations *a priori* of any kind. The lunar epoch of such a cycle might be any lunar term whatsoever in the course of one and the same natural lunation; the solar epoch might be any solar term whatsoever in the course of one and the same solar month: yet the one being once adjusted to the other at the beginning of a period of this kind, the decursus of the period itself would keep them in the same or a corresponding relation perpetually; and at the end of the period would bring them back to their original relation exactly. The epoch then of the Apis cycle, the lunar and the solar terms on which it must take its rise simultaneously, are of no importance to this cycle *per se*. They must be fixed and determined by other considerations, and not that of the nature or the genius of the cycle itself. Nothing is necessary to the origination of such a cycle, as a condition of the cycle itself, except that its lunar and its solar terms, whatsoever they are, once fixed and defined, shall be invariable, and continue ever after, (nominally at least,) the same.

In a particular case then of such a cycle, (like this of the Egyptian which we are considering,) the question of its actual epoch must be treated as one of *fact;* and must be decided by testimony; i. e. in the usual way in which other questions of fact are wont to be decided. We begin therefore with observing that, according to Pliny, Solinus, and Ammianus Marcellinus, one of the marks of the Apis, and evidently one of the most obvious and most notorious, was that on the right side, which they compared to the lunar crescent, or to the appearance presented by the new moon, when its horns are budding. We think we are authorized to infer from this symbol that the lunar epoch of the cycle was the corresponding state of the moon; that is, not the *luna prima* or change, but the *phasis.* It does not seem possible to put any other meaning on this symbolical crescent of the Apis; especially as a crescent of white on a ground of black. Nor was it perhaps without a meaning that this crescent was confined to the right side of the animal, and not common to the left also. The new moon is never visible for the first time except in the west, with the crescent turned to the sun: and viewed in that position by a spectator on the earth, its bright side, that is this crescent, seems to answer to his *right side.* The sun is on his right side at that moment, as well as on the right of the moon. The first inference therefore to which we may come, respecting the lunar epoch of the Apis cycle in particular, is that it could not have been the *luna prima,* or change, when the moon is necessarily invisible; it must have been some lunar term later than that at least; and not earlier than the first phasis.

We observe in the next place that the number of marks on the body of the Apis in all, according to Ælian, was 29. This number no doubt was significant; though we are not sure that it is correctly represented by Ælian; and that it was not more truly 28 than 29. Let us suppose it however to have been 29. We give this number a meaning if we suppose it to have been purposely intended of the number of lunar φῶτα in every month; that is, of the number of days for which there is *light* more or less perceptible in one and the same moon: or if we suppose it the number of days in

every lunar month, reckoned from the first perception of the lunar light. This first perception is the first phasis; and the earliest perception of the first phasis could scarcely be reckoned any where earlier than the second day of the natural lunar month. On this principle, the perfect measure of the natural lunar month, as represented by the calendar lunar month, would be 1 + 29 days, that is 30 days: and the first lunation in a cycle like this of the Apis, as we have seen, must necessarily be a month of 30 days. There are various testimonies of a different kind still extant, from which it may be collected that 30 days was considered in Egypt the standard of the perfect lunar month; that is, in the Apis cycle.

*Μῆνα δὲ γράφοντες*, says Horapollo[w], *βάϊν ζωγραφοῦσιν, ἢ σελήνην ἐπεστραμμένην εἰς τὸ κάτω· βάϊν μὲν τῆς προειρημένης ἐπὶ τοῦ φοίνικος αἰτίας χάριν*[x]*· σελήνην δὲ ἐπεστραμμένην εἰς τὸ κάτω, ἐπειδὴ, φασὶν, ἐν τῇ ἀνατολῇ πεντεκαίδεκα μοῖραι ὑπάρχουσι πρὸς τὸ ἄνω τοῖς κέρασιν ἐσχηματίσθαι· ἐν δὲ τῇ ἀποκρούσει τὸν ἀριθμὸν τῶν τριάκοντα ἡμερῶν πληρώσασαν εἰς τὸ κάτω τοῖς κέρασι νεύειν.* Ἀπόκρουσις is used here of the waning of the moon from the full to the change; during which process it is well known that the horns of the lunar disk turn the convex side to the east; which is here expressed by *κάτω νεύειν*: from the change to the full on the contrary it is turned to the west; here expressed by *ἄνω ἐσχηματίσθαι*. And as 15 *μοῖραι*, that is days, are assigned to each of these processes; the perfect lunation including both, from the change to the change again, must have consisted of 30 days.

The same author observes again[y], *Μῆνα δὲ γράφοντες, σελήνης σχῆμα καθὸ καὶ πρόκειται ἔχον εἴκοσι καὶ ὀκτὼ ἡμέρας ἰσημερινὰς μόνας, ἐξ εἰκοσιτεσσάρων ὡρῶν τῆς ἡμέρας ὑπαρχούσης, ζωγραφοῦσι· καθ' ἃς καὶ ἀνατέλλει, ταῖς δὲ λοιπαῖς δύο ἐν δύσει ἐστίν.* Ἀνατέλλει means here *is visible, rises visibly*: *ἐν δύσει*

w i. 4.

x See i. 3: where the *φοῖνιξ* or palm tree was spoken of as an emblem of the year, *διὰ τὸ (τὸ) δένδρον τοῦτο μόνον τῶν ἄλλων κατὰ τὴν ἀνατολὴν τῆς σελήνης μίαν βάϊν γεννᾷν, ὡς ἐν ταῖς δώδεκα βάεσιν ἐνιαυτὸν ἀπαρτίζεσθαι.* It is evident that *ἀνατολὴ* must here be meant of the first *visible* appearance of the moon; as if that were its first *rising κατ' ἐξοχὴν*, though that must necessarily take place in the west. It is used in the same sense in the passage in the text.

This notion of the palm-tree's shooting out a fresh branch every lunar month in the year, appears in the Koran of Mahomet also.

y i. 66. Cf. Plutarch, De Iside et Osiride, xliii.

*ἐστὶ is invisible, is as good as set.* This clearly ascertains either 28 lunar *φῶτα* in every month, or 28 lunar terms from the first appearance of the moon to the end of the month; and we apprehend its true meaning to be the latter not the former. The passages quoted *supra* relating to the scarabæus[z] recognised 28 days as some proper lunar period; which will now be understood to have been most probably meant of this interval. The same interval is probably intended by Ælian in the following allusion[a]; though he does not specify it: *Καὶ ταῦτα δὲ ὑπὲρ τῆς Αἰγυπτίας ἴβεως προσακήκοα· ἱερὰ τῆς σελήνης ἡ ὄρνις ἐστί· τοσούτων οὖν ἡμερῶν τὰ ᾠὰ ἐκγλύφει ὅσων ἡ θεὸς αὔξει τε καὶ λήγει.* The ancients report a singular fact of the natural history of the cat, concerning which we observe Fides penes auctores sit: we refer to it simply as bearing on the present question: *Τῇ δ' ἀψῖδι τοῦ σείστρου* (of Isis) *κατὰ κορυφὴν ἐντορεύουσιν αἴλουρον, ἀνθρώπου πρόσωπον ἔχοντα, κάτω δὲ ὑπὸ τὰ σειόμενα πῇ μὲν Ἴσιδος πῇ δὲ Νέφθυος πρόσωπον· αἰνιττόμενοι τοῖς μὲν προσώποις γένεσιν καὶ τελευτὴν . . . τῷ δ' αἰλούρῳ τὴν σελήνην, διὰ τὸ ποικίλον καὶ νυκτουργὸν καὶ γόνιμον τοῦ θηρίου· λέγεται γὰρ ἓν τίκτειν, εἶτα δύο καὶ τρία καὶ τέσσαρα καὶ πέντε· καὶ καθ' ἓν οὕτως ἄχρι τῶν ἑπτὰ προστίθησιν, ὥστ' ὀκτὼ καὶ εἴκοσι τὰ πάντα τίκτειν, ὅσα καὶ τῆς σελήνης φῶτά ἐστιν*[b]—*Τὰς δώδεκα ὥρας ἡ αἴλουρος διακρίνει, νυκτὸς καὶ ἡμέρας οὐροῦσα καθ' ἑκάστην ἀεὶ, δίκην ὀργάνου τινὸς ὡρογνομονοῦσα*[c]*· ἀλλὰ καὶ τῆς σελήνης, φησὶν, ἀπαριθμεῖται τὰ φῶτα τοῖς οἰκείοις γεννήμασι. καὶ γὰρ τὴν αἴλουρον ζ' μὲν τὸν πρῶτον η' δὲ τὸν δεύτερον τόκον (τίκτειν), τὸν τρίτον ε', καὶ δ' τὸν τέταρτον, καὶ γ' τὸν πέμπτον, ἐφ' οἷς δύο τὸν ἕκτον, καὶ ἕνα ἐπὶ πᾶσι τὸν ἕβδομον. καὶ εἶναι τοσαῦτα γεννήματα τῆς αἰλούρου ὅσα καὶ τὰ τῆς σελήνης φῶτα*[d].

The only question then will be, what was the date of the phasis? whether the luna *secunda*, or the luna *tertia?* Philo Judæus, an Alexandrine Jew, and familiar with the details of the Egyptian lunar calendar, of which his countrymen in Egypt made as much use as the Egyptians themselves, recognises 30 days as the ordinary complement of the lunar

z Page 487

a De Natura Anim. ii. 38. cf. x. 29.

b Plutarch, De Iside et Osiride, lxiii.

c Horapollo asserts this fact of the Cynocephalus (dog-ape) not of the cat, see lib. i. 16. He restricts it however to the two equinoxes.

d Photius, Cod. 242. p. 343. l. 2. Damascii Vita Isidori.

month: *῞Οταν μὲν γὰρ λέγομεν ἀπὸ πρωΐας ἄχρις ἑσπέρας ὥρας εἶναι δώδεκα, καὶ ἀπὸ νεομηνίας ἄχρι τριακάδος ἡμέρας τριάκοντα· συγκατατάττομεν τήν τε πρώτην ὥραν καὶ τὴν νεομηνίαν*[e]: and yet it is clear from other parts of his works that he reckoned the *νουμηνία* from the phasis: *Τρίτη δ' ἡ μετὰ σύνοδον, τὴν κατά τινα σελήνην νέαν, νεομηνία*[f]—'*Επόμενοι δὲ τῇ τάξει τρίτην ἑορτὴν ἀναγράφομεν τὴν κατὰ σελήνην νουμηνίαν. πρῶτον μὲν ὅτι ἀρχὴ μηνὸς, ἀρχὴ δὲ καὶ ἀριθμοῦ καὶ χρόνου τίμιον· ἔπειτα δὲ ὅτι κατ' αὐτὴν οὐδὲν ἀφώτιστον ἐν οὐρανῷ . . . νουμηνίᾳ γὰρ ἄρχεται φωτίζειν αἰσθητῷ φέγγει σελήνην ἥλιος, ἡ δὲ τὸ ἴδιον κάλλος ἀναφαίνει τοῖς ὁρῶσι*[g]: and still it is capable of proof, and it will appear hereafter, that the new moons, cyclically reckoned according to the calendar in Egypt in his time, were four days later than the change.

The hieroglyphical symbol for the month even on the monuments and on the sculptures of Egypt is the lunar crescent. This is also the emblem of their Thoth *Lunus:* and of the lunar *Decani.* Every thing in short is decisive that the lunar month of the Egyptians was reckoned from the *phasis;* and consequently that such must have been the rule of the Apis cycle. The only question will be whether the phasis was reckoned on the luna *secunda*, or on the luna *tertia.* And here the primitive rule of the reckoning of noctidiurnal time is to be taken into account; which, as we have shewn, was always the rule in Egypt. Lunar time being measured by the period of 24 hours, or of the noctidiurnal cycle, as much as solar perpetually; this rule was as applicable to that as to solar. Now the second *luna*, according to this rule of reckoning, would not be later than 24 hours after the change, or luna *prima:* and, as a general rule, the phasis could never be assumed for any climate in the east, not even for that of Egypt, so early as 24 hours after the change. But on the luna *tertia* reckoned according to the same rule, (that is, 48 hours after the change,) it might be so looked for in Egypt perpetually. In Arabia, and wheresoever the lunar rule of the Mahommedan ritual, which is regulated solely by the phasis, is observed accordingly; the phasis is not looked for within less than 48 hours after the

e Quod a deo mittantur somnia: Opp. i. 692. 41.

f De Septenario et Festis diebus, Opp. ii. 278. 18.

g Ibid. 292. 1.

change. We conclude then that the rule of the Apis cycle to reckon from the phasis was to reckon from the luna *tertia:* and it will be seen hereafter that this was actually the case*.

SECTION IX.—*On the dates of the conception, of the birth, and of the natales Apidis, as they may be collected from the testimonies produced.*

It appears from these testimonies that the Apis was believed to be animated by Osiris; the Apis was an impersonation of Osiris in the form of a bull: and yet that the power or influence by which this bull was fitted to become the representative or the habitation of Osiris was communicated from the moon; the conception of this future habitation of Osiris was effected in some manner or other by means of the moon.

We learn from Plutarch that there was a day in the Egyptian calendar which bore the name of the Ἔμβασις (*entrance*) of Osiris "into the moon:" and though there seems to be an hiatus in this part of his text, yet it plainly appears from

* Theophrastus reckons the interval of the ἀσέληνοι ἡμέραι in every month, (the interval from the last phasis to the first, the interval of the silent moon, or of the *interlunium,*) from the τετρὰς φθίνοντος to the τετρὰς ἱσταμένου: i. e. from the 27th of the old moon to the 4th of the new: vi. De Signis, cap. i. § 5. 8: Sotion, an author cited in the Geoponica, i. 13. reckoned it from the 29th of the old moon to the 2d of the new: Σωτίων δὲ ἀσελήνους ἡμέρας καλεῖ τὰς ἀπὸ κθ΄ σελήνης ἕως β΄, ἐν αἷς ὑπὸ τὰς ἀκτῖνας τοῦ ἡλίου ἡ σελήνη κρύπτεται καὶ οὐ φαίνεται τοῖς ἀνθρώποις: and the necessity of the case seems to require that both these terms should have been reckoned by him inclusively.

The author of some of the poems ascribed to Orpheus, whosoever he was, called the new moon Μονόκερως μόσχος. καὶ ὁ μὴν ἐν αὐτῇ (τῇ ἀρχῇ) παρ' Ὀρφεῖ προσαγορεύεται Μονόκερως μόσχος. ἁπλῶς μὲν γὰρ ὁ μὴν . . . λέγεται βοῦς[a]. We should be entirely of opinion that both these denominations, both for the young moon and for the old, were ultimately borrowed from the Apis cycle. Tzetzes, ad Hesiod. Opp. et Dies, 763, has quoted some lines of this poem of Orpheus, from which it may be inferred that he dated the phasis most properly on the third day.

Πρῶτον μὲν πρώτῳ ἐνὶ ἤματι φαίνεται Ἄρης,
μήνη δ' εἰς τ' Ἄρην ἐπιτέλλεται· ἴσχεο δ' ἔργων·
τὴν δὲ γὰρ ἐξανύσασα φύσις δίκερων ἀναφαίνει.
αὐτὰρ ἐπὴν τρίτον ἦμαρ ἀπόπροθεν ἠελίοιο,
πᾶσιν ἐπιχθονίοισι φυτοσπόρου αἰτίη ἀλκῆς,
τετράδι δ' αὐξομένη πολυφεγγέα λαμπάδα τείνει κ', τ. λ.

h Proclus in Hesiod. Opp. et Dies, 767.

the context that the calendar date of this ἔμβασις was the *first* of Phamenoth; and that the ἔμβασις itself was connected in some manner or other with the generation of the Apis: Τὸν δὲ Ἆπιν εἰκόνα μὲν Ὀσίριδος ἔμψυχον εἶναι, γενέσθαι δὲ (lege γίνεσθαι) ὅταν φῶς ἐρείσῃ γόνιμον ἀπὸ τῆς σελήνης, καὶ καθάψηται βοὸς ὀργώσης. διὸ καὶ τοῖς τῆς σελήνης σχήμασιν ἔοικε πολλὰ τοῦ Ἄπιδος περιμελαινομένου τὰ λαμπρὰ τοῖς σκιεροῖς * * ὅτι τῇ νουμηνίᾳ τοῦ Φαμενὼθ μηνὸς ἑορτὴν ἄγουσιν, Ἔμβασιν Ὀσίριδος εἰς τὴν σελήνην ὀνομάζοντες, ἔαρος ἀρχὴν οὖσαν[h].

The last observation, concerning the coincidence of the first of Phamenoth with the beginning of spring, applies to the state of the case in Plutarch's own time; as we may probably shew on a future occasion. There is apparently an hiatus in his text here; which is much to be regretted; as the original would probably have decided an important question, viz. that of the final end of this supposed entrance of Osiris into the moon; and whether it was prior to the conception or to the birth of the Apis, or posterior to it: for that it was connected in some manner or other with the generation or with the birth of the Apis, the context, we think, must clearly imply.

The date of this entrance however being the first of Phamenoth, that is, the first of the *lunar* Phamenoth; if it was only later than the conception or the birth of the Apis, neither of these latter could have happened later than the first of Phamenoth; nor later in fact than the month which immediately preceded Phamenoth, that is, Mecheir. But this entrance of Osiris into the lunar Phamenoth, on the very first day of that month, the first day in which he could enter into and take possession of a particular lunar month, might be preparatory not to the conception nor to the birth of the Apis, but to the *natales Apidis* in the proper month. The birth of the Apis and the natales Apidis in the ritual sense of each of those terms were very different things: and there was at least four months' interval between them. This is the explanation of the final end of the ἔμβασις to which we incline. We shall find in due time that it is confirmed by the matter of fact.

[h] De Iside et Osiride, xliii. The text has been corrected by reading ἔτι δὲ for ὅτι.

But to proceed with our present course of investigation. Phamenoth was the seventh month in the Egyptian calendar, Mecheir the sixth, Athyr the third. If the conception of the Apis were to be dated on a certain day in Mecheir, its birth must be dated on a certain day in Athyr. It was known to the ancient Egyptians that the natural interval from the conception to the birth (the interval of uterogestation) was much the same in the cow as in the human subject: not less than nine months of 30 days each, or 270 days, in either. In this particular instance of the conception and the birth of the Apis, it could not have been assumed to be otherwise; the Apis being only an impersonation of Osiris in the form of a bull, and Osiris being after all a type of the humanity; and, though born of a cow, and in the shape of this bull, being still the representative of the human nature, only in its greatest perfection; that is, as identical also with the divine. Osiris, in the person of the Apis, united the animal, the human, and the divine nature all at once. The law of his birth therefore must have been that both of the animal and of the human nature at once: and the interval between the conception and the birth of the Apis on this principle must have been that both of the animal and of the human subject at once.

Athyr being the tenth month from Mecheir, reckoned inclusively, if the conception took place in Mecheir, the birth must do so in Athyr; and *vice versa*, if the birth took place in Athyr, the conception must have taken place in Mecheir. Now *one* argument, (and in our opinion a very strong argument,) that the birth actually took place in Athyr, is derivable from the name of this month itself. Hesychius' gloss on Ἀθὺρ is, Μὴν καὶ βοῦς παρὰ Αἰγυπτίοις: i. e. Athyr meant both a month and a bull in the Egyptian. It would be a great mistake to suppose so learned a grammarian and etymologist to have confounded the Egyptian Ἀθὺρ with the Hebrew or Punic θὼρ, the word for bull in that language, as Plutarch informs us[i]: Θὼρ γὰρ οἱ Φοίνικες τὴν βοῦν καλοῦσι. It does not appear however that the word for bull in the Egyptian was actually Athyr; or that this word occurs in that sense either in the modern Coptic, or in the ancient

[i] Sylla, xvii.

Egyptian. How then are we to explain the gloss of Hesychius? By a stated connection between the month Athyr and the bull; founded on the well known fact of the birth of the Apis, at the proper time in every cycle, on a certain day in that month.

It would not follow even from this that the months could have had no names before the invention of the fable of the Apis; or that the third month was purposely called Athyr because the birth of the Apis was purposely appointed to fall out in it: but quite the contrary, that the third month must have been already called Athyr, before this fable was invented; or else that the Apis itself would never have been called Athyr also. And this too, as we shall see hereafter, was actually the case. Athyr is sometimes represented as the name of the Egyptian Venus: Ἀθὺρ ὁ μήν· καὶ τὴν Ἀφροδίτην Αἰγύπτιοι καλοῦσιν Ἀθὺρ, καὶ μῆνά γε τὸν τρίτον τοῦ ἔτους ἐπώνυμον ταύτῃ πεποιήκασιν[k]. The Egyptian Aphrodite was only another conception and another impersonation of their Isis; and Isis was really as old as the first imposition of names on the months. Yet, to judge from the analogy of Ἀτάρβεχις in the Egyptian, answering to Ἀφροδιτόπολις in Greek, and from the Ator or Hattor of the monuments, the Egyptian name of Isis, in this conception and form of Aphrodite, was different from Ἀθὺρ, though it might resemble it. Plutarch explains Ἀθυρὶ (one of the titles of Isis, in the Egyptian) by οἶκον Ὥρου κόσμιον[l]: as if compounded of three words, one of which denoted house, another Horus, and the third decent or comely. We may recur to this explanation on a future occasion. All that we shall say on this subject at present is, that the names of the months were much older than the invention of the fable of the Apis; but they were not older than the invention of the fable of Osiris and Isis.

It may be inferred from the statements of the ancients, that the interval of uterogestation was very commonly assumed at 40 weeks, or 280 days. Pythagoras' doctrine appears to have been that the actual interval was 39 weeks complete, and the day of the birth was the first day of the 40th week[m]: which would make the entire interval from the conception inclusive to the day of the birth inclusive 275 days. According

k Etymologicum Magnum, in voce.

l De Iside et Osiride, lvi.

m Censorinus, De Die Natali, xi.

to Varro the interval was to be assumed at 280 days or 40 weeks complete: Et quod hi, qui justissime in utero sunt, post ducentos octoginta dies postquam sunt concepti quadragesima denique hebdomade ita nascuntur[n]. It is probable that the opinion of Pythagoras on this subject was derived from Egypt; and that he found the interval in question estimated there at 280 days: and as there cannot be much doubt that in the case of the human subject, and as a general rule, this estimate would err on the side of excess; it is most probable that in Egypt it was the interval assumed not in every instance but in a particular case: an interval which might hold good even of the human subject under particular circumstances, but as a general rule only of the human subject in such a special case as that of the conception and the birth of the Apis; in which two laws must necessarily be united, the law of the human and the law of the animal nature; and both must be modified in some manner or other by a third, the law of the divine. This peculiar measure of the natural interval of uterogestation of 280 days, we say, is most probably to be traced to Egypt; and in Egypt most probably was assumed and proposed as properly the measure of the interval in this particular case of the conception and birth of the Apis; which from the nature of the case itself must partly agree with the ordinary law of that kind, and partly differ from it, and follow a law of its own. And though we propose this conclusion at present only as conjectural, yet we shall find hereafter, we trust, that it is actually true; and that the absolute interval from the supposed day of the conception of the Apis to the day of his birth was neither more nor less than 280 days. If then the former took place on a certain day in Mecheir, not later than *five* days before the end of the month, the latter must take place on a certain day in Athyr.

Again, it appeared from Ælian that, even after the birth and the first recognition of the Apis, it was to be kept four months at least in a state of nonage; and to be treated all that time as a calf. It follows that the installation at Memphis afterwards, so minutely and circumstantially described by him, could not take place less than four months from

n Aulus Gellius, iii. x. cf. 16.

the birth. If then the stated date of the birth was some time in Athyr, the stated date of this installation must have been some time in Phamenoth.

It appeared from Diodorus also, that the Apis must have been kept some forty days at least, in the course of this interval between his birth and his installation, at Nilopolis, and not at Memphis: and to reconcile *his* account with Ælian's we must suppose these 40 days to have been the first 40 after his birth; the first month and ten days of the whole interval of four months between the birth and the installation. There might be particular reasons for regarding these first 40 days after the birth of the Apis as an integral period of a peculiar kind. Diodorus has told us in what manner this part of the interval was devoted to the manifestation of the Apis to the women of Egypt; who were not permitted to see it at any period of its existence except these 40 days, during which it could scarcely be said its existence had been made public to any besides: and though this part of Diodorus' account suggests many reflections, bearing on the present question, we forbear to enter upon them. We will observe merely that not only the ordinance of the Levitical ritual among the Jews, relative to the purification of women after childbirth, in the case of males, but the observation of antiquity [o], conspire to designate the first 40 days of human existence as an interval *sui generis*, and critically detached from the rest. We have little doubt that it was some consideration of this kind which determined the first authors of the fable of the Apis, who prescribed and defined all its parts and circumstances, to make a particular period of the first 40 days of its life, and to devote it to uses and purposes peculiar to itself.

To return however to our proper subject. Diodorus distinctly attests that the Apis was kept 40 days after his birth at Nilopolis; but he does not say he was kept there no more: he does not say that at the end of those 40 days he was taken directly to Memphis. His account therefore is not inconsistent with Ælian's. There may be an omission in it; but there is nothing to contradict Ælian. There is the

[o] Censorinus, De Die Natali, xi: Aristot. De Anim. vii. 10. Opp. i. 587. l. 2–8. Solinus, cap. i. § 72.

same kind of omission in Ælian's account compared with that of Diodorus; and yet there is nothing in it inconsistent with his. The four months between the recognition and the installation, distinctly specified by him, must have been passed at Nilopolis: though we learn from Diodorus only that the Apis, as soon as born, and as soon as recognised, was taken to Nilopolis. At Nilopolis too must it have been usual to construct the *οἰκία*, hut or cabin, (for Ælian no doubt considered it a profanation to call it a stabulum or stable,) in which the pupillage of this sacred calf, according to rule and precept, was destined to be past: a cabin purposely so constructed as to face the east, (a very significant circumstance,) that the Apis might always look that way, might always be ready to receive and salute the first beams of the sun and the moon at their rising: both of these, in the Egyptian estimation of each, being forms and manifestations of Osiris and Isis respectively, and the Apis itself, as we have shewn, being equally related to each.

It is manifest that both Ælian and Diodorus mean the same occasion at last, when they speak of the removal of the Apis to Memphis, and of the *ναῦς θαλαμηγὸς*, expressly employed for that purpose. All our authorities are agreed that, for some reason or other, the proper abode of the Apis, after he had been solemnly received and acknowledged in his proper capacity, was called *θάλαμος* in Greek; and no doubt something to the same effect in Egyptian too. And *θάλαμος* being properly *νυμφὼν*, the *οἶκος γαμήλιος*, it is probable the abode of the Apis was so called in reference to the mystical nature of the ceremony of his installation; which was a kind of solemnization of the marriage of the sun and of the moon; a marriage destined to last from the beginning to the end of his proper cycle. Let the reader observe too how Ælian speaks of the *ἱερὰ ναῦς*, and of the transport of the Apis in that to Memphis; without having mentioned previously that he was any where *on* the Nile. These minute and undesigned coincidences between totally different accounts of the same things confirm one the authenticity of the other.

Nilopolis according to D'Anville, though not close to the Nile, was very near it; lying on the west side almost opposite to Aphroditopolis on the east; which is another curious

coincidence; viz. that the Apis, during his nonage and state of a calf at Nilopolis, should constantly face Atarbechis, the city of Isis in the person of Atar, or Venus. There were no doubt reasons why the infancy of the Apis was appointed to be past at Nilopolis, that is, the city of the Nile. The Nile was the representative of the element of water; and water was the origin of all things. The office assigned to the Nile on the sculptures is to assist the Demiurge himself in the processes of creation. He supplies the watery principle of the ὕλη of all things. The Nile must have a share and a principal share in the formation of such a creature as the Apis. The water of the Nile was notoriously nutritious and fattening too; though that would be simply a physical reason. The name of the Nile also, and the name of the Apis, in the Egyptian, differed so little, that one must have been borrowed from the other; and Nilopolis in the Egyptian might mean "city of Apis," or "city of the Nile" indifferently.

But to proceed. Nilopolis was higher up the Nile than Memphis; yet not so much as 30 Roman miles direct from it; scarcely a quarter of a day's sail down the river. Now according to Ælian, the proper period being arrived for transporting the Apis from this city to Memphis in the ἱερὰ ναῦς above mentioned; the time of the day chosen for that purpose was ὑπανισχούσης νέας σελήνης, "as the new moon was rising." This part of the ceremony then had a distinct relation to the moon. It must begin, as "the new moon was rising." But what are we to understand by this rising of the new moon? In answer to this question we must refer to Pliny the Elder; the oldest of our authorities both for the number of days during which the *natales Apidis* lasted, and for the time of the day at which they both began and ended: and we may add too, the most authentic and trustworthy of all.

Now according to Pliny these *natales* lasted *seven* days; and they ended at *noon*. Consequently they began at noon. Their proper duration was from noon on the *first* day to noon on the *eighth* day. It follows that the time designated by Ælian as the commencement of the same ceremony also must have been the time of noon. The rising of the new moon therefore meant by him must have been the rising of

the moon at noon. In this way one of our authorities comes in to supply the omissions, or to ascertain and clear up the meaning, of another.

This discovery however is of great importance. There is but one time in the course of every natural lunar month at which the moon rises at noon, or may be assumed to do so; viz. at the end of the first and the beginning of the second quarter; or as the Greeks usually designated the age of the moon at that time, (from the appearance presented by its orb, equally divided between the illumined and the unillumined part,) when the moon was διχότομος: though it should always be remembered, that this designation *per se* is ambiguous; because the orb of the moon exhibits the same appearance again, at the end of the third and at the beginning of the fourth quarter. The latter stage in the lunar month however could not possibly have been intended by Ælian; for that is the time in every month when, as a general rule, the moon rises at midnight. At the first dichotomy only does it rise at noon, culminate or pass the meridian at sunset, and set at midnight.

It follows that the proper date of the beginning of the ceremony of the consecration of the Apis was the first lunar dichotomy. And this serves to explain those other marks of the Apis which are specified by Porphyry in particular: τὸ διχότομον and τὸ ἀμφίκυρτον: each of them allusive to well known lunar phases, the first to that which we have just pointed out, the second to that which is exhibited half-way between the first quarter and the full, when the moon is ten or eleven days old; a stage in the lunar synodic revolution which is sometimes called the octant. In the time of Porphyry, when the calendar dates of the Apis cycle were five or six days in advance of the lunar; this appearance of τὸ ἀμφίκυρτον, gibbousness or convexity, would be exhibited by the moon even at the first dichotomy: and it is evident that he joins both these marks together in such a manner as to imply that there was little or no difference between them: τὸ διχότομον in this instance was the same thing as τὸ ἀμφίκυρτον, and *vice versa*.

We may have occasion to demonstrate hereafter by the production of testimonies on a large scale, that the first lunar

dichotomy in the idiom of antiquity is always to be understood of the *luna octava*. It follows that according to Ælian and Pliny, one in conjunction with the other, and one as explained by the other, the beginning of this ceremony of the installation of the Apis at Memphis, the first *natales Apidis* in the course of the same cycle, the first *high festival* of the Apis ritual, was the *luna octava* at noon; and its end the *luna quintadecima* at noon. It began consequently when the moon was half illumined, half in possession of the plenitude of its light; half the just type and reflection of the sun; it was completed when it was fully so; and it lasted as long as the process of this consummation itself meanwhile. We must know very little of the genius of Egyptian superstition, or of their regard to the correspondence of times and seasons to the ceremonies appointed for them; could we suppose that such coincidences as these were accidental.

We have attained therefore, as we believe, by a series of just and legitimate inferences, from testimony certainly extant, and for any thing which can be alleged to the contrary safely to be trusted; to a correct idea of the date of one at least of the ceremonies of the Apis ritual, the most solemn of all; the date of the *natales Apidis* in the first year of the cycle:- this date in the lunar reckoning, the proper reckoning of the cycle itself, being the second lunar quarter, the seven days of lunar time, measured by the period of 24 hours, from noon at the end of the first quarter to noon at the beginning of the third; that is, from the middle point of the first half of the lunar month, the interval from the change or conjunction to the full, to the middle point in the lunar month itself, the πανσέληνον opposition or full. The question still remains of the proper month.

The lunar months in the Apis cyle were necessarily to be reckoned perpetually in terms of the solar. The interval between the birth and the installation of the Apis being four months; if Athyr was the solar month of the birth, Phamenoth was the solar month of the installation. And the date of the installation being the lunar dichotomy of the proper lunar month, the seat of this dichotomy in the solar month must have been in Phamenoth; though on what day in the solar Phamenoth we are not yet in a condition to say: only that

as every solar term in the Apis calendar must have had its corresponding lunar one, and *vice versa*—the lunar dichotomy of Phamenoth must have been some proper term in the solar Phamenoth also.

The four months from the birth to the installation of the Apis being assumed to be four lunar months, and the last term of this interval to be the *luna octava* of Phamenoth; if we reckon back four lunar months from this term we come to the *luna octava* of Athyr: if the last term is assumed to be the *luna prima* of Phamenoth, four months before that bring us to the *luna prima* of Athyr. Between these two lunar terms then and in this month, the *luna prima* of Athyr and the *luna octava* of Athyr, if Ælian spoke advisedly when he spoke of four months' interval between the birth of the Apis and the installation, must the birth have taken place; not earlier than the one, nor yet later than the other. It appears however that, according to the actual mode of speaking on this subject, howsoever inconsistent with what was naturally to be expected of it, the natales of the Apis were never predicated of his birth, but only of his installation. His true birthday was considered to be not that on which he was born, or on which he was first recognised as the Apis, but that on which he was first publicly acknowledged as such; on which he was first installed in that capacity, and first treated with all the honours supposed to be due to the representative of Osiris. This is not an obvious distinction; and yet as soon as it is explained it appears to be only a just and reasonable one, and only consistent with the principles of the relation of the Apis to Osiris itself, and with the truth of the character of the latter even as represented by the former. It would be inconsistent with that character to suppose that Osiris himself should pass through the same gradual stages from infancy to maturity as the Apis. The Apis must go through those stages, and grow up from a calf to a bull; but Osiris could not do so. Nor yet could Osiris be first and properly united to the Apis and made one with the Apis, until he had attained to his maturity. The proper natales of the Apis therefore would be this period of his existence, at which and from which he was first permanently united to Osiris, and permanently identified with him; and

consequently first publicly recognised and treated as divine: not that of his birth.

Now when we consider that there was a stated day for the entrance of Osiris into the moon, and that that moon was this moon of Phamenoth, the moon which was destined to witness the consummation of the union of Osiris with the Apis, the moon in which the birthday of the Apis itself, as the offspring of the moon, was dated, (not from his conception, not from his natural birth, but from his natales, his mystical birth,) the moon in which the date of his birth was the date of his maturity, and of the fulness and perfection of his nature also; we cannot hesitate to conclude that the entrance of Osiris into the moon of this month had something to do with the ceremony of this month; and that it was preparatory to it. This embasis therefore being dated on the first of this month, on the *νουμηνία* of Phamenoth itself; it is an argument, in our opinion, that the *νουμηνία*, rather than any other lunar term in the proper month, was the date of the birth of the Apis. The *νουμηνία* was the first day of the month and the first of any visible light from the moon; when the months were reckoned from the phasis. It was the first day therefore on which any such influence could emanate from the moon, as that to which this fable attributed the birth of the Apis; an emanation from the light of the moon. In the mystical theory of this process, whereby it was represented in a totally different light from the natural process of the same kind, the conception, the birth, and the maturity of the Apis were all regarded as the work of fifteen days, the first fifteen days of Phamenoth; and were all dated accordingly; his conception at the *νουμηνία*, his birth at the dichotomy, his maturity at the *πανσέληνον* or full.

We may infer then that the natural birth of the Apis, four months before the *νουμηνία* of Phamenoth, took place on the *νουμηνία* of Athyr. And indeed since the Apis was the visible type of the lunar cycle, which must obviously bear date from the *νουμηνία* either in the sense of the conjunction or in that of the phasis; on what day could it come into existence with so much propriety as on the luna *prima* of its proper month? There is no doubt that the Apis had a stated day for its natural as well as for its mystical birth; each of them

determined by principles of its own, and very possibly one of them totally different from the other. But nothing of this kind, we may take it for granted, was left to the chapter of accidents. The Apis had a stated day for disappearing, and a stated day for reappearing. Both were fixed; and both can be determined. We believe that we ourselves have ascertained them both. It was part of this fable of the Apis, and not the least argument of its truth, as represented by the priests and as believed by the people, that Osiris in the person of the Apis was true to the times appointed by himself; to his time of disappearing and to his time of reappearing; and that he never failed to keep to his day in each respect.

And hence, we may approximate in the last place to the date of the conception of the Apis. Reckon back 280 days from the *luna prima* of Athyr, and you come to the full moon, the *luna quintadecima*, of Tybi or of Mecheir.

| | | d. | h. |
|---|---|---|---|
| Eight months of 30 and 29 days | = | 236 | 0 |
| One of 30 | = | 30 | 0 |
| Half of one of 29 | = | 14 | 12 |
| 9 months and ½ of the calendar | = | 280 | 12 |

In mean natural lunar time the interval is almost exactly the same.

| | | d. | h. | m. | s. | th. |
|---|---|---|---|---|---|---|
| 9 months | = | 265 | 18 | 36 | 22 | 58·723 |
| ½ a lunⁿ. | = | 14 | 18 | 22 | 1 | 16·596 |
| 9 months ½ | = | 280 | 12 | 58 | 24 | 15·319 |

It follows that, if the Apis was born on the luna *prima* of Athyr, it must have been conceived at the luna quintadecima of Tybi or of Mecheir: and this too in itself would be a remarkable coincidence; and one which the authors of this fable were very likely to affect on purpose: viz. that the Apis should be conceived at the full moon, and should be born at the new. The full moon was the natural type of impregnation; the new moon of birth.

With regard to the actual dates of either of these things in the proper solar months corresponding to these lunar ones; not having yet investigated and fixed the true solar epoch of the cycle itself we cannot yet lay them before our readers,

though they are known to ourselves. It appears to us, and to the best of our judgment, that the conclusions at which we have already arrived from the data already produced must be regarded as reasonable; all of them *a priori* as probable; one of them as consistent with another; and each of them as fairly deducible from the collation of our several testimonies. Further than these we cannot proceed at present, without the help of data which we have not yet produced. Thus much however we may say even now, in anticipation of our future investigations, that whatsoever we have thus inferred from our present information upon these subjects turns out ultimately to be matter of fact; on the strength too of proofs, (not yet adduced,) which cannot be characterised as less than demonstrative.

## CHAPTER III.

### *On the date of the first Apis cycle, and on the mode of arriving at it.*

#### SECTION I.—*Appearance of an Apis in the time of Cambyses.*

IN the regular course of a cycle like the Apis, the appearance of an Apis would be an infallible criterion of the end of one such cycle, and of the beginning of another. There is one well attested instance of such an appearance; which coincided with the return of Cambyses to Egypt from his Ethiopian expedition. Ἀπιγμένου δὲ Καμβύσεω ἐς Μέμφιν ἐφάνη Αἰγυπτίοισι ὁ Ἄπις, τὸν Ἕλληνες Ἔπαφον καλέουσι. ἐπιφανέος δὲ τούτου γενομένου αὐτίκα οἱ Αἰγύπτιοι εἵματά τε ἐφόρεον τὰ κάλλιστα καὶ ἦσαν ἐν θαλίῃσι[x]. If then the true year of this expedition and of this return can be determined, the date of an Apis cycle will be determined also.

#### SECTION II.—*On the date of the reduction of Egypt by Cambyses.*

The date of the invasion and reduction of Egypt by Cambyses is not uniformly represented in history. Manetho

[x] Herodotus, iii. 27.

dates these events in the 5th year of his reign[y], six years before its end: Syncellus also in the 5th[z], three years before its end: Eusebius[a], Olymp. lxiv. 1, in the 6th of his reign. This year might answer to B. C. 525. Diodorus' date is Olymp. lxiii. 3. B. C. 526—525; either for the death of Amasis, or for the expedition of Cambyses[b]: though the context implies the former rather than the latter.

One thing however is certain from the account of Herodotus, which is the most trustworthy of all, viz. That this invasion and this reduction of Egypt, and every thing else which arose out of it, could not have been long before the end of the reign of Cambyses itself. The length of his reign cannot be assumed at more than eight years. It was not in reality so much. Those therefore who dated this invasion and reduction of Egypt three years before the close of his reign were nearer to the truth than those who dated it six.

We cannot enter here on the chronology of the kings of Persia: but we may have occasion to do so, if we ever come to inquire into the composition and details of the celebrated canon of kings, or canon of Ptolemy; which, notwithstanding the pains and labour bestowed upon them, have never yet been properly explained. The true date of the death of Cyrus and of the accession of Cambyses was the spring of B. C. 530: the length of Cambyses' reign is most correctly represented by Herodotus, at 7 years, 5 months[c]: its end consequently must have coincided with the close of the summer quarter, B. C. 523. From this datum it is easy to calculate that his invasion and reduction of Egypt could not have been earlier than the spring or the autumn of B. C. 525: and this being actually the 6th year of his reign, it is confirmed by the testimony of such of the ancients as date the invasion in the 6th of his reign: and in its turn it confirms their testimony also.

Moreover this is the only date of the reduction of Egypt by Cambyses, which is consistent with the history of the kings of Egypt themselves, until then. Psammenitus, (the son and successor of Amasis,) in whose reign it happened,

y Hermapion, Appendix, xx. p. 41: cf. xxi. p. 45: Syncellus, 143. 16.
z Page 457. 12.
a Chronicon Arm. Lat. ii. 26: 203. Cf. Thesaurus Temporum, ad ann. 1491. Olymp. lxiii. 3
b i. 68.
c iii. 66.

reigned only six months[d]: Amasis, his father, before him reigned, according to Herodotus[e], 44 years: according to Manetho also 44[f]: according to Syncellus 50[g]: according to Diodorus 55[h]; which we should consider to be an accidental corruption of his text, for 45 years. We may fairly infer then that Amasis and Psammenitus together reigned 45 years at least. Now the infallible testimony of Scripture, that is, of the two prophets Jeremiah and Ezekiel, both of them contemporaries, and the latter an eyewitness of the fulfilment of this part of their predictions; this infallible testimony, especially that of Ezekiel, ascertains the fact of an invasion and reduction of Egypt, older than this of Cambyses, and by a greater than Cambyses; followed by the death of the last of its native princes, belonging to the line and the dynasty founded by Psammetichus, and by the substitution in his stead of a native Egyptian indeed, but still merely a creature, a dependent, a tributary of this conqueror. This conqueror was Nebuchadnezzar: the last of the Pharaohs, defeated and killed in battle by him, was Hophra, the Apries of Herodotus. The date of this event, and of the consequent reduction of Egypt, was B. C. 571. The tributary, dependent, and vassal, whom he appointed to be king of Egypt in the room of Pharaoh-Hophra, when he left it again, was the Amasis of Herodotus. This is the true account of these things; the account ascertained by the infallible testimony of Scripture: and not that false account which the Egyptians themselves, of after-times, imposed on Herodotus.

The beginning of the reign of Amasis on this principle might be as early as B. C. 570: and it might be as late as B. C. 569. The latter is most consistent with the length of his reign assigned by Herodotus: for if he reigned 44 years, he would die in B. C. 525. We are entirely of opinion that he began to reign about the beginning of B. C. 569, and died about the middle of B. C. 525: so that the length of his reign might be represented either at 44 years complete, or at 45 current, indifferently.

A fact is recorded even of the short reign of Psammenitus,

d Herodotus, iii. 14. e iii. 10. f Syncellus, 141. 12. g 397. 3. h i. 68.

which bears upon this question. A copious shower of rain is said to have fallen in his reign even at Thebes in Upper Egypt[i]. If rain ever falls in Egypt, in the ordinary course of things, it is in November and on the sea coast*. We may infer from this fact then that the rainy season in Egypt, such as it is, came within the six months of the reign of Psammenitus: and if so, that these must have coincided with the last six months of the natural year.

It appears too from Herodotus' account of the circumstances of the reduction of Egypt at last[k], that the inundation was either not yet begun when it was going on, or already over. What else can be inferred from the fact, which he records[l], of Cambyses' sending an herald to Memphis in a ship of Mytilene, *ἀνὰ ποταμόν*? What historian would speak of sailing either up or down the river, when the waters were out; and all Egypt was turned into a sea? which Herodotus compares to the Ægean, and the cities, standing out of the water yet surrounded by it on all sides, to the Cyclades islands, interspersed in the Ægean sea† !

* In the book of the prophet Zechariah Egypt is referred to as a country in which there was no rain: ch. xiv. 18. Philo Judæus, De Mose, i: ii. 99. 5: speaking of the plague of hail: *Οὕτως οὖν τῆς χώρας διακειμένης, καὶ ταῖς χειμεριναῖς ἐαριζούσης τροπαῖς, καὶ τῶν μὲν πρὸς θαλάττῃ μόναις ψεκάσιν ἀραιαῖς λιπαινομένων, τῶν δ' ὑπὲρ Μέμφιν τὸ βασίλειον Αἰγύπτου μηδὲ νειφομένων τὸ παράπαν, ἐξαίφνης κ', τ. λ.* Prosper Alpinus, who spent four years at Cairo in Egypt and in its vicinity, never observed rain any where except on the coast, viz. at Alexandria, Rosetta, Damieta, (Res Ægypti, i. i. p. 4, 5,) nor in any month but November; and then more like *dew* than rain: cf. De Medicina Ægypt. i. cap. 7. p. 11. Modern travellers and residents in Egypt assert that it does rain at present, five or six times in a year, even at Thebes: and this is one of those points on which ancient experience and modern are committed apparently together: and both being entitled to equal credit, as the experience of eyewitnesses, we must suppose that the climate of Egypt itself has undergone a slight change in this respect. Aristides the Sophist asserts that he was three years in Upper Egypt and never saw so much as a cloud in the sky in summer: *λόγος Αἰγύπτιος*, xlviii. 450. 17. (Dindorfii): cf. Dio. li. 17.

† On this subject we subjoin the following testimonies.

i. Herodotus[m]: *Ἐπεὰν δ' ἐπέλθῃ ὁ Νεῖλος τὴν χώρην, αἱ πόλις μοῦναι φαίνονται ὑπερέχουσαι, μάλιστά κῃ ἐμφερέες τῇσι ἐν τῷ Αἰγαίῳ πόντῳ νήσοισι. τὰ μὲν γὰρ ἄλλα τῆς Αἰγύπτου πέλαγος γίνεται· αἱ δὲ πόλις μοῦναι ὑπερέχουσι. πορθμεύονται ὦν, ἐπεὰν τοῦτο γένηται, οὐκέτι κατὰ τὰ ῥέεθρα τοῦ*

i Herodotus, iii. 10. k iii. 11–14. l 13. m ii. 97.

The Nile begins to rise at the summer solstice: the inundation is at its height half-way to the autumnal equinox: the Nile is already reduced within its banks again before the winter solstice. And as Memphis was taken soon after this mission of the herald, and Psammenitus was treated by Cambyses in the manner described by Herodotus, only ten days after its reduction[t]; this criterion conspires with the

ποταμοῦ, ἀλλὰ διὰ μέσου τοῦ πεδίου. ἐς μέν γε Μέμφιν ἐκ Ναυκράτιος ἀναπλώοντι παρ' αὐτὰς τὰς πυραμίδας γίνεται ὁ πλόος· ἔστι δὲ οὐδ' οὗτος, ἀλλὰ παρὰ τὸ ὀξὺ τοῦ Δέλτα καὶ παρὰ Κερκάσωρον πόλιν. ἐς δὲ Ναύκρατιν ἀπὸ θαλάσσης καὶ Κανώβου διὰ πεδίου πλέων ἥξεις κατ' Ἄνθυλλάν τε πόλιν καὶ τὴν Ἀρχάνδρου καλευμένην.

ii. Diodorus Siculus[n]: Τὸ δὲ γινόμενον περὶ τὴν ἀνάβασιν τοῦ Νείλου τοῖς μὲν ἰδοῦσι θαυμαστὸν φαίνεται, τοῖς δ' ἀκούσασι παντελῶς ἄπιστον .... καὶ τῆς μὲν χώρας οὔσης πεδιάδος, τῶν δὲ πόλεων καὶ τῶν κωμῶν ἔτι δὲ τῶν ἀγροικιῶν κειμένων ἐπὶ χειροποιήτων χωμάτων, ἡ πρόσοψις ὁμοία γίνεται ταῖς Κυκλάσι νήσοις. τῶν δὲ χερσαίων θηρίων τὰ πολλὰ μὲν ὑπὸ τοῦ ποταμοῦ περιληφθέντα διαφθείρεται βαπτιζόμενα, τινὰ δὲ εἰς τοὺς μετεώρους ἐκφεύγοντα τόπους διασώζεται. τὰ δὲ βοσκήματα κατὰ τὸν τῆς ἀναβάσεως χρόνον ἐν ταῖς κώμαις καὶ ταῖς ἀγροικίαις διατρέφεται, προπαρασκευαζομένης αὐτοῖς τῆς τροφῆς. οἱ δ' ὄχλοι πάντα τὸν τῆς πληρώσεως χρόνον ἀπολελυμένοι τῶν ἔργων εἰς ἄνεσιν τρέπονται, συνεχῶς ἑστιώμενοι καὶ πάντων τῶν πρὸς ἡδονὴν ἀνηκόντων ἀνεμποδίστως ἀπολαύοντες[o].

iii. Strabo[p]: Ἐν δὲ ταῖς ἀναβάσεσι τοῦ Νείλου καλύπτεται πᾶσα καὶ πελαγίζει πλὴν τῶν οἰκήσεων. αὗται δ' ἐπὶ λόφων αὐτοφυῶν ἢ χωμάτων ἵδρυνται, πόλεις τε ἀξιόλογοι καὶ κῶμαι, νησίζουσαι κατὰ τὴν πόρρωθεν ὄψιν.

iv. Himerius[q]: Ἴδοις ἄν, ἴδοις καὶ τὰ μεγάλα τότε κατὰ τὴν ἐκεῖσε χώραν θαύματα· ἐπὶ μιᾶς γῆς πλωτῆρα τὸν αὐτὸν καὶ γηπόνον, καὶ νεμομένους βοῦς καὶ μετ' ὀλίγον ὁλκάδας, καὶ νῆσον ἐξαίφνης τὴν πρόσθεν πόλιν χερσεύουσαν κ', τ. λ.

v. Achilles Tatius[r]: Νεῖλος ὁ πολὺς πάντα αὐτοῖς γίνεται, καὶ ποταμὸς καὶ γῆ καὶ θάλασσα καὶ λίμνη· καὶ ἔστιν τὸ θέαμα καινὸν ναῦς ὁμοῦ καὶ δικέλλη, κώπη καὶ ἄροτρον, πηδάλιον καὶ τρόπαιον, ναυτῶν ὁμοῦ καὶ γεωργῶν καταγωγή, ἰχθύων ὁμοῦ καὶ βοῶν. ὃ πέπλευκας φυτεύεις καὶ ὃ φυτεύεις τοῦτο τὸ πέλαγος γεωργούμενον.—Ἔχει γὰρ οὕτω τὰ τοῦ Νείλου ῥεύματα. καθ' ἑκάστην διώρυχα χῶμα ἔχουσιν Αἰγύπτιοι ὡς ἂν μὴ πρὸ καιροῦ τῆς χρείας ὑπερέχων ὁ Νεῖλος τὴν γῆν ἐπικλύσῃ κ', τ. λ.[s]

vi. Eustathius, ad Dionys. Perieg. 226: Πληροῦσθαι δὲ ὑπὸ θερινῶν ὄμβρων τὸν Νεῖλόν φασι .... πελαγίζειν δὲ τὴν Αἴγυπτον ἐν τῇ ἀναβάσει αὐτοῦ, ὥστε τὰς ἐπὶ λόφων ἢ χωμάτων οἰκήσεις νησίζειν οἷον τοῖς πόρρωθεν βλέπουσιν.

n i. 36.
o Cf. Prosper Alpinus, Res Ægypti, lib. 1. cap. ii. p. 8 ad calc.
p xvii. 1.
q Oratio xiv. § 9. p. 620: Cf. Ælian, De Animalibus, x. 43: Seneca, Natur. Quæst. iv. ii. 10, 11.
r De Clitophontis et Leucippes Amoribus, iv. 12.
s Ibid. 14.
t Herod. iii. 14.

other to fix the actual date of these events to the latter end of the natural year, B. C. 525.

SECTION III.—*Date of the Æthiopic expedition of Cambyses.*

The expedition to Æthiopia then, the next thing related of the history of Cambyses, could not have begun before B. C. 523. The preparations had yet to be made even after the reduction of Egypt[e]. An embassy had to go to, and to return from, Æthiopia before they began to be made[f]. And as the expedition certainly took place at last in the spring of the year, it is impossible that this could have been the spring of B. C. 524. It is equally so that it could have been that of B. C. 522; for Cambyses himself was then dead. It must therefore have been the spring of B. C. 523.

Cambyses marched up the country first as far as Thebes: afterwards to the borders of the desert. And when he had got there, the want of the means of subsistence compelled him to abandon his undertaking, and to retrace his steps. Now Syene on the borders of the desert was 460 Roman miles, according to D'Anville's map of ancient Egypt, distant from Memphis, and in a right line too: and, at the rate of 8 miles a day =9 by road, this would require nearly 60 days' march, without including stoppings. When Xerxes was retreating from Attica after the battle of Salamis, and marching with all the expedition that he could; he did not march at a greater rate than this of 9 Roman miles a day. To march back to Memphis would require as much time as to march to Syene. The entire length of the expedition therefore cannot be estimated at less than 120 days: yet even in that case, though it had begun at the end of February, it might be over before the end of June, or not later than the beginning of July.

SECTION IV.—*On the date of the expedition, as determinable by the testimony of the Apis cycle.*

The actual year of this expedition however having been synchronous with the first year of an Apis cycle, the first use which we may make of that fact is to verify the year of the expedition itself; that is to decide between these two

e Herodotus, iii. 17–25. f Ibid. 19–25.

years, B. C. 524 and B. C. 523, in one of which it must have taken place. And though, at first sight, this may look like the *probatio* of *idem per idem,* to determine the first year of an Apis cycle by the date of this expedition, and then the year of the expedition by the date of such a cycle; in reality it is no such thing, as we hope to make it appear.

B. C. 524 answered to Nab. 224: and the equable reckoning in the style of that æra and the Julian reckoning in the æra vulgaris were so nearly on a par at this time, that, as our tables shew, two equable years, Nab. 223 and 224, both entered in the course of the same Julian year, B.C. 525, one Jan. 1 at 18 hours, the other Dec. 31 at 18 hours. This last date is the same as Jan. 1 at midnight, B. C. 524. We assume that this was the Julian year corresponding to Nab. 224.

It appears from Pingrè that there was a solar eclipse, for the meridian of Paris, Feb. 15 2 h. P. M. B. C. 524. Consequently a mean new moon, Jan. 17 1 h. 16 m. A. M. at Paris; 1 h. 55 m. 41 s. later, at Memphis. The phasis of this moon, 48 hours afterwards, could not be dated earlier than Jan. 19 at 18 h. or Thoth 20 at the same time, according to the primitive rule.

Now, though no one could venture to say that, in a cycle like the Apis, it is impossible that the solar epoch of the cycle could ever have been attached to Thoth 20, yet every one must admit that it cannot be considered probable. It would be difficult to conjecture a reason, why the lunar epoch even of such a cycle as the Apis should have been taken from the 20th of the solar month.

The next year however, Nab. 225, Thoth 1 at midnight would still fall on Jan. 1 at midnight as before; but B. C. 523. There was a solar eclipse this year also, for the meridian of Paris, Feb. 4 11 h. P. M. Consequently a mean new moon Jan. 6 10 h. 16 m. A. M. the phasis of which, as before, must be dated Jan. 8 at 18 hours at the earliest; and the *luna quarta* from the phasis, the *luna quinta* from the change, Jan. 11: which would answer to Thoth 11 at midnight also.

Now to such an epoch of the Apis cycle, as Thoth 11, there could be no objection *a priori.* Eleven days are the

measure of the difference between the lunar year of this cycle, 354 days, and the solar of 365, perpetually. They are the epact of the lunar year in this cycle, and invariably so; except in the intercalary years of the cycle, when the number of days in the year is 355, and the epact is consequently 10. This number of days is the stated amount of the recession of lunar time on solar, in the equable year, perpetually. The lunar epoch of a year of this kind being attached to Thoth 11 in the first year, it would be Epagomene 5 in the second; and so on perpetually. In short, next to the first day of the equable solar year itself, no solar date in that year would be so likely to be selected for the epoch of the lunar associated with it, as the eleventh of Thoth.

It follows then that, if the Ethiopic expedition of Cambyses really coincided with B. C. 524, and really coincided with the first year of an Apis cycle; the lunar epoch of that cycle must have been attached to the 20th, or even to the 22nd, of the solar Thoth. But if it coincided with B. C. 523, and with the first year of such a cycle also; the lunar epoch of that cycle must have been attached to the 11th of the solar Thoth. This latter is possible, and even *a priori* probable. The former is not impossible; but it is not probable. In this manner, without knowing any thing more of the true year of the expedition, except that it was one of these two, B. C. 524 and 523; and that it coincided with the first year of an Apis cycle in general; we might venture to pronounce that it must have been B. C. 523, not B. C. 524: because an Apis cycle might very possibly have begun in the former year, but not in the latter. And it is manifest that this decision would not be wrong; for we have already shewn, from other and entirely independent data, that the year was actually B. C. 523. On the other hand, the year of this expedition being thus determined; then if it truly coincided with the first year of an Apis cycle, we may approximate, by means of that coincidence, to the discovery of the solar epoch of the cycle itself. It must have been the 11th of Thoth. The lunar epoch, even on this principle, it is true, must have been the *luna quarta* dated from the phasis. But that involves a question on which we have not yet entered, nor could do before this time, when we have first attained to

something like an idea of the solar epoch of the cycle: but which we must now enter upon, and explain as fully as may be necessary.

SECTION V.—*On the true lunar and solar date of the Apis cycle. Objection or difficulty* a priori.

We begin the consideration of this question with observing that no doubt it will at first sight appear inconsistent that the lunar epoch of the Apis cycle should have been, as we have already concluded, the date of the phasis, the *luna tertia* reckoned from the conjunction, and yet the lunar epoch in a particular instance, such as that which we have just been considering, should be found to have been the *luna quinta.*

To this objection we reply in the first place that, whatsoever difficulty there may be in explaining a matter of fact; if it is a matter of fact, attested, authenticated, and confirmed by competent evidence and proof of the fact, it must be received, it must be believed, and it must be acquiesced in, whether it can be accounted for or not. We cannot set aside a well attested matter of fact, on any grounds of improbability, or because of any appearance of difficulty in it, *a priori* whatsoever. This is the capital error of the modern school of historical scepticism; and this is the practical absurdity which is most characteristic of it, and which renders it totally unfit to deal with questions of this kind according to the principles of common sense, and to the usual rules of proceeding in the ordinary affairs and business of life; that of substituting a standard of its own, as the test and criterion of the truth of facts, which the universal judgment and consent of mankind never did nor ever could recognise; which these men themselves, in every thing but their writings and speculations on past matters of fact, belie and confute every moment of their lives.

In the next place, as to the actual matter of fact; that the calendar reckoning of the Egyptian cycle of Apis did some time or other bear date from the *luna quinta* is proved by the testimony of the Macedo-Egyptian Metonic calendar, introduced into Egypt in B. C. 306, under the auspices of Ptolemy Lagi, along with the Macedo-Hellenic in Asia Minor, under those of Antigonus, and along with the Macedo-

Syrian under those of Seleucus Nicator, of which we have already given some account[g]; and hope hereafter, if God permits, to give a full account. It is proved by the testimony of Pliny the elder; who tells us that for some reason or other the *luna quarta* was an especial object of veneration in Egypt: Quartam eam (i. e. *lunam*) maxime observat Ægyptus[h]. We know that among the Druids, in like manner, the *luna sexta* was held in peculiar estimation: and we know also that the *sexta luna* was both the epoch of their calendar reckoning and the epoch of their secular periods. We conclude that the similar estimation of the *luna quarta* in Egypt was founded in a similar relation to the calendar there too: and we shall see, before we have done with this subject, that that was actually the case. That this lunar term is specified by Pliny as the *luna quarta*, not the *luna quinta*, is merely an accidental distinction. The same lunar term is meant in each instance; the true description of which was the *luna quinta*, though it might be represented also as the *luna quarta*.

Section VI.—*On the tendency of a fixed equable lunar epoch to rise in terms of the lunar reckoning down to the ingress of period xxvii of the Fasti.*

It is not necessary, for the sake of this particular question, that we should go over any part of our work again: but it is very necessary that we should here remind the reader of the conclusions established in former parts of our work, respecting the relations of the Nabonassarian reckoning of equable noctidiurnal and annual time to the cyclical; and of both to the Julian[i]. Referring our readers therefore to what was there and then demonstrated, bearing on the present question, we assert without fear of contradiction that, if the actual date of the first Apis cycle among the Egyptians was only older than the 27th Nabonassarian type and the 27th Julian type of our Fasti, (that is, than B. C. 728,) whatsoever the lunar term to which it might have been originally attached, and whatsoever the solar agreeing with that at first, yet, if

[g] Supra, Diss. vii. ch. v. sect. iii. [h] H. N. xviii. 79.
[i] Supra, Diss. viii. ch. ii and iii.

this latter term in the equable solar notation continued nominally always the same, the former could not possibly continue the same also. It must rise higher and higher, with every successive change of the Nabonassarian and of the Julian types of the Fasti, down to the ingress of period xxvii; when first, as we have shewn, the necessity of this constant rise with successive types, in the same way as before at least, would appear to cease. We have shewn that a given cyclical term remaining fixed, a given Julian term, which agreed with it at first, must drop in the cyclical notation one term lower and lower, or rise in the Julian one term higher and higher, to agree with the cyclical still. The same Julian and the same Nabonassarian, or proportionably the same Nabonassarian, term would agree with each other through successive types of either kind perpetually; but neither of them with the same cyclical, before a certain time.

Now since a given lunar date is to all intents and purposes a given Julian date; it follows that any lunar term, set at par with any cyclical term, before the epoch of period xxvii; (the luna prima, for instance, with the first of Thoth;) could not continue to be at par with it longer than for one period. At the end of that period, this luna prima must drop to the fifth Epagomene; and the lunar term, now at par with the first of Thoth, must be the luna secunda. At the ingress of another period, the luna prima must be found at par with the fourth Epagomene, and the first of Thoth at par with the luna tertia; and so on perpetually down to the ingress of period xxvii; when first, for the reasons already explained, the necessity both of this descent on one hand, and of this ascent on the other, would be found to cease.

Now when this is once understood, there will no longer be any appearance of inconsistency in such a phenomenon as that which we are considering. It will be seen to be very possible, nay, under the circumstances of the case, to be necessary and inevitable, that the same cyclical and the same lunar term might begin with being related to each other in a certain manner, and yet end in being related in a very different manner: very possible in short, and even inevitable, that the original solar epoch of the Apis cycle, and ever

after too, might be Thoth 11, and the original lunar epoch the *luna tertia*, yet the ultimate lunar epoch be the *luna quinta*.

## SECTION VII.—*Application of the above principles to the determination of the date of the first Apis cycle.*

If the state of the case however is such as we have just represented it to be; the intelligent reader must already have anticipated a very obvious and yet a very important inference from such premises; viz. that they must lead infallibly to the discovery of the true age of the Apis cycle among the Egyptians; in that state in which it has been transmitted to posterity beyond the epoch of our 27th period. We are in possession of proofs indeed, which would determine its date at once; but we prefer at present to ascertain this point on totally independent grounds.

Suppose it known then that the lunar epoch of this Apis cycle, at the ingress of period xxvii, became permanently fixed to the *luna quinta;* and yet known also, or on good grounds to be believed, that this lunar epoch was originally attached to the luna tertia. What must be the necessary inference from both these facts in conjunction? What but that the original lunar epoch had risen two terms between the first introduction of the cycle and period xxvii? And what must be inferred from that fact too? What but that the cycle itself at the ingress of period xxvii must have been two periods old, and no more? Consequently if the date of its fixation thus coincided with period xxvii, the date of its origination must coincide with period xxv.

We propose to apply this test to the investigation and determination of the actual date of the Apis cycle; the cycle known historically by that name; the cycle with which we are acquainted as yet only from such testimony as that which we began with producing, and which we have hitherto been considering. It is necessary to make this distinction between this historical Apis cycle and *any* such cycle as the Apis; for the Egyptians had really a cycle of that kind, as we hope hereafter to shew, incomparably older than this historical one, and from which even this was ultimately derived.

i. We begin therefore with reckoning back *eight* cycles of 25 equable years, 200 years of the æra of Nabonassar, from Thoth 11, Nab. 225, Jan. 11, at midnight, B. C. 523, already ascertained to have been the first year of an Apis cycle: and it brings us to Thoth 11, Nabon. 25, March 2, B. C. 723. There was a solar eclipse that year, April 25, 8.30 A. M. at Paris: and consequently a mean new moon, February 25, 7h. 1 m. 55 s. A. M.: the luna quinta of which may therefore be assumed March 1 at 18 hours, or March 2 at midnight; in either case Thoth 11, Nabon. 25.

This year is only five years later than Nabon. 20, B. C. 728, the ingress of period xxvii. The first year of this period was not the first year of an Apis cycle but the 21st: and though that makes no difference to the investigation which we are instituting, it is a necessary consequence of this fact that the true epoch of the fixation of the cycle, in terms of the cycle itself, was not the first year of period xxvii, B. C. 728, but the sixth, B. C. 723.

ii. We reckon back five cycles of 25 equable years, 125 equable years from this date; not however in the æra of Nabonassar, which fails us in 24 years from this date, but in the æra cyclica; and from æra cyclica 3284 = Nabon. 25, which is just the same thing: and we thus get from Thoth 11, æra cyclica 3284, March 2 at midnight, B. C. 723, to Thoth 11, æra cyclica 3159, April 1 at midnight, B. C. 848, the 21st year of period xxvi. At this time Thoth 11 should be found to be falling on the luna quarta. There was a lunar eclipse Jan. 14, 3. A. M. at Paris, B. C. 848: consequently a mean new moon March 28, 22 h. 50 m. 6 s. from midnight at Paris. The *luna quarta* of this moon may be assumed either March 31 at 18 hours, or April 1 at midnight: in either case Thoth 11, æra cyclica 3159.

iii. We go back five more cycles of 25 years, 125 equable years from Thoth 11, æra cyclica 3159, April 1, B. C. 848, to Thoth 11 æra cyclica 3034, May 1 B. C. 973, the eighth year of period xxv. At this time Thoth 11 should be coinciding with the *luna tertia*. There was a solar eclipse March 30, 5 h. 15 m. P. M. at Paris this year; and therefore a mean new moon April 29, 5 h. 59 m. A. M. at Paris. The mean new moon is sometimes later than the true, as well as sometimes

earlier. We have calculated the true new moon of April, B.C. 973, and found that it actually fell on April 29, as nearly as possible at 5 h. 1 m. 30 s. for the meridian of Heliopolis in Egypt. The luna tertia of this moon consequently must be dated April 30 at 18 hours, or May 1 at midnight: in either case Thoth 11 æra cyclica 3034.

iv. We might if we pleased go back another period of five cycles and 125 years beyond this date in period xxv: for there is nothing in the nature of things to prevent our going back to any distance from period to period, and still discovering the same phenomenon of the descent of the same cyclical term, Thoth 11, lower and lower in the lunar reckoning, one number for every period; and under certain circumstances even two. But we could not go back even one year beyond the epoch of period xxv æra cyc. 3027 B. C. 980, without finding Thoth 11 already attached to the *luna secunda*, and not to the *luna tertia*. If then there is reason to believe that the original lunar epoch of the Apis cycle was the *luna tertia*, it is manifest that, if we went back beyond the epoch of period xxv, we should go back beyond the true date of the cycle itself. And this being the case, forasmuch as æra cyc. 3034, B. C. 973, the eighth year of this period, is certainly the date of the first perfect cycle of 25 years, traced back perpetually from Nab. 225, æra cyc. 3484, wh ih could possibly fall within that period; it is evident that the age of the cycle itself may be as old as the eighth year of this period; but it cannot be older. It might not be so old as this eighth year; it might be even four cycles younger; but it could not be older. We believe however that, having arrived at this year, (though the earliest year of the period in which such a coincidence was possible,) we have arrived at the true date of the first Apis cycle itself, Thoth 11, æra cyclica 3034, May 1, B. C. 973: and we have still proofs of that fact in reserve, which can leave no doubt concerning it.

In this manner, and by means of reasonings founded on matters of fact, (made known by authentic testimony,) and on the immutable laws and the necessary relations of time of one kind to time of another, we have arrived at a discovery of unspeakable importance, so far as regards the use which is to be made of it: viz. that the Apis of the Egyptians, hitherto

supposed by the credulous and unsuspecting admirers of Egyptian fables, to be one of the oldest objects of worship among them, (much older than any thing contained in the Bible which they are willing to believe,) was in reality one of the youngest; and was not a thousand years older than the Christian æra itself. For that the Apis was older than his own cycle, they may dream, if they please, to escape from an unwelcome conclusion; but they will never prove, nor will common sense ever believe. These two things are married to each other, the Apis, and the cycle of the Apis. No sophistry of theirs will ever divorce them; though the union of these two things itself should be their own confutation and their own confusion.

To this subject however we may return on a future occasion. At present we proceed with our undertaking, which is the confirmation of all our conclusions by unexceptionable testimony: and we have testimony still to produce to this one point of the true date of the Apis cycle, which is as certain as it is infallible, and as trustworthy as the laws of time and the laws of nature themselves; testimony which can never be appealed to, wheresoever it is applicable, without being decisive; testimony which will still be decisive, whether sceptical men believe it or not; testimony which will still be true, though all the learning, and all the talent, and all the ingenuity, of the world were banded together to belie it; the testimony of Holy Scripture, and in this particular instance the contemporary testimony of Scripture, if that can be supposed to add any thing to its force, or to its truth; which others may suppose if they please, but, for our part, we neither can nor do suppose.

### SECTION VIII.—*On the confirmation of the epoch of the Apis cycle by the testimony of Scripture.*

It may be taken for granted that the deification of brutes, the worship of animal nature in one shape or other, had been introduced into Egypt before the Exodus. There is no sceptic of the truth of the Bible, yet implicit believer in the monuments, sculptures, and dynasties of ancient Egypt, who must not, and probably will not, admit thus much: because he finds it on the monuments and sculptures them-

selves; long before, (as he supposes,) the time of the Exodus. But the declared object of the last of the plagues in the eventful year of the Exodus itself, the most severe and indiscriminate of all the visitations inflicted upon the Egyptians, was "to execute judgment on the gods of Egypt[d]," as well as on its princes and its people; and therefore the firstborn of cattle were included in it as well as the firstborn of men. In fact Eusebius reports[e] after Alexander Polyhistor and Artapanus that, according to the tradition of the people of Heliopolis, the king who set out in pursuit of the Israelites, and perished with his followers in the Red sea, did so not only μετὰ πολλῆς δυνάμεως, but ἅμα καὶ τοῖς καθιερωμένοις ζώοις.

It is certain at least, from the uniform testimony of the best informed of the ancients, that the Mneuis of the Egyptians was older than the Apis; though the monumental chronology, with the same disregard of truth in this instance which it shews in every other, makes the Apis as old as the Mneuis, or even older than it. It is certain also that the Mneuis was sacred only to the sun; the Apis to the moon as much as to the sun; that the Mneuis was proper to Heliopolis, the Apis to Memphis; that the Mneuis from time immemorial was the tutelary genius of Heliopolis, the Apis was the patron and guardian of Memphis, whether from time immemorial or not yet from the time that Memphis itself came into being, It is certain too that Heliopolis was the Scriptural On, and was as old as the time of Joseph, and as the descent into Egypt, at least; that Memphis was the Scriptural Noph, of the existence of which not an hint is discoverable in Scripture before the time of the prophets Hosea and Isaiah[f]. To this subject however we hope to return hereafter.

Now, though it appears from the Book of Exodus that the people of Israel, little more than three months after the Exodus, set up one Egyptian idol in the shape of a calf; it does not appear that they set up two. No commentator, ancient or modern, ever imagined that they set up two; ever thought of making two calves out of this one. Many have

d Exodus xii. 12: Numbers xxiii. 4.

e Præparatio Evangelica, ix. xxvii. § 35. cf. § 4: § 9: § 12.

f Hosea ix. 6: Isaiah xix. 13.

supposed this one was meant for the Apis; none has ever supposed it was meant for the Mneuis also; or that there were two objects of worship set up at this time, one of them intended for the Apis, the other intended for the Mneuis. What then is the inference from this fact? That the Egyptians had two sacred calves at this time, or only one? That the Egyptians had two, one as sacred as the other, and yet that the Israelites knew only of one, or reckoned one only to be sacred? Can any one doubt about the true answer to be returned to such questions as these, who knows that the Apis was 587 years younger than the Exodus, and the Mneuis was 120 years older, at least? We hope to shew on a future occasion that this was really the case; that the Mneuis was much older than the Exodus, yet not older than the descent into Egypt.

It is with reason therefore that Scripture in the account of the proceedings after the Exodus supposes the Israelites perfectly familiar with the idea of one divine calf at least, imbibed in Egypt: it is equally as reasonable and natural that it does not suppose them to have any idea as yet of more than one. This one calf, it will now be understood, was the Mneuis, an older impersonation of the Divinity in that form than the Apis by 700 years. The Bible is a sealed book to sceptical men; the light of revelation is darkness; contemporary testimony itself is a dead letter, and common sense is utterly useless as a guide—or else they must long since have seen reason to suspect the good faith and credibility of the monuments, if for no other absurdity, yet for *this*; that they make the Apis as old as the Mneuis, if not older, and both incomparably older than the Exodus; at which time contemporary testimony itself shews that the Egyptians as yet were acquainted with one bull only, which they esteemed and treated as divine.

With the evidence then of this fact at the time of the Exodus, that one sacred bull only could yet have been known in Egypt, let us contrast the proof of another, which meets us lower down in the history of the same people of the Israelites, and in the same book, the Bible; viz. that at the time of the separation of the kingdoms of Israel and Judah, in the reign of Rehoboam son and successor of Solomon in

the kingdom of Judah, and in that of Jeroboam the 1st, the son of Nebat, the first king of Israel; when the same kind of objects of idolatry, borrowed from the Egyptians also, were introduced by this Jeroboam among his own subjects, two animals of this description and two such objects of worship were set up by him, one at Bethel, the other at Dan; which Scripture designates by the name of the two calves[g]. Is it not an obvious inference from this fact also, that two calves must have been worshipped in Egypt at this time, though only one was so at the Exodus? Who could pretend to say that such a contingency was impossible as only one sacred bull at the Exodus, and yet two at this time; who knew that this deification of a second calf among the Israelites was 600 years later than the Exodus? The argument then stands thus: At the Exodus there was only one sacred bull in Egypt; which might be the Mneuis, but could not be the Apis. Therefore the calf of the Exodus might be meant of the Mneuis but could not be of the Apis. At the time of the separation of the kingdoms there were two sacred bulls in Egypt; if the Apis cycle at least was as old as this separation, or not younger than it. Therefore these two calves of Jeroboam might be meant both of the Apis and of the Mneuis.

We learn from Scripture[h] that the end of the reign of Solomon was passed by Jeroboam in Egypt; and at the court of that king of Egypt whom Scripture denominates Shishak; the monuments, as they are decyphered and read in modern times, denominate Sheshonk; and profane history, whether as the same person or as a different, calls Sesoosis and Sesonchosis[i]. We date the flight of Jeroboam to Egypt conjecturally four years before the death of Solomon, B. C. 978; though it might have been somewhat either earlier or later than that. The reign of Solomon began in B. C. 1014, and ended in B. C. 974. The former date is ascertained by the year of his reign in which he began to build the temple, B. C. 1011, the third of his reign; by the date of the 480

[g] 1 Kings xii. 26, 27, 28-32: xiii. 32, 33: xiv. 9: 2 Kings xxiii. 15. 19, 20: 2 Chron. xi. 15: xiii. 8, 9.

[h] 1 Kings xi. 40: xii. 2: 2 Chron. x. 2.

[i] Diodorus, i. 53-58: Scholia ad Apollonium Rhod. iv. 272: Birch, Egyptian Antiquities in the British Museum, i. p. 16.

years[k], as soon as that is properly understood; and by the whole course and succession of Scriptural chronology, from the Exodus downwards, until then: the latter, by the length of his reign, which is represented in Scripture as 40 years[l]. Four years of the reign of Solomon and apparently of that of Shishak too were thus spent by Jeroboam in Egypt; the last of these B. C. 975 and part of B. C. 974 also.

It might be collected from the Book of Kings[m], (though it is not necessarily so to be, the language of that book there being doubtful,) that Jeroboam was sent for from Egypt by the ten tribes, after the death of Solomon and after the accession of Rehoboam; but it is more truly to be inferred from the Book of Chronicles[n], that he had already come back of his own accord, as soon as he heard of the death of Solomon. We may take it for granted however that, if Solomon died only any time in B. C. 974, Jeroboam was still in Egypt some time longer the same year; though how much longer we could not say, unless we knew at what time in the year Solomon actually died; which Scripture has not left on record.

If however the Apis cycle, which we have traced back to this time from B. C. 523, had been already in existence before B. C. 974; then B. C. 974 must have been the last year of the cycle; in which according to the mystical law of the cycle Osiris must be supposed to have migrated from one existing type and representation of himself, preparatory to taking possession of another of the same kind. In this year, according to the ordinary rule of the cycle, the old Apis having been evacuated by Osiris must have been put to death; and a new Apis must have been conceived, in order to become the habitation of Osiris through another cycle. There was a stated date for both these things: the latter we have already considered, and determined to the *πανσέληνον* of Tybi or of Mecheir.

Now B. C. 974 answering to æra cyclica 3033, and that being supposed to be the last year of a cycle; it would consist of nine lunations only, the first of which would bear date Chœac 20. Chœac 20 in this year answered to Aug. 9:

k 1 Kings vi. 1. l xi. 42: 2 Chron. ix. 29–31. m 1 Kings xii. 2. n 2 Chron. x. 2, 3.

and therefore the πανσέληνον of Mecheir, the 15th of the third month from Chœac, to October 20 at 18 hours, or October 21 at midnight. There was a lunar eclipse this year October 20 2·15 A. M. for the meridian of Paris, which cyclically reckoned might be assumed as October 19 at 18 hours; so that October 20, at 18 hours, the 15th of Mecheir, would be the lunar 16th: and that would be nearly in the same proportion to the full moon as the luna 3[a] to the new: and the lunar epoch of the Apis cycle itself, (as we have seen,) was the luna *tertia*, not the luna *prima* *.

We should form a very inadequate idea of the cunning, the contrivance, and the forecast of the most consummate race of impostors which the world ever witnessed, the Egyptian priests of this time, of former times, and of subsequent times, could we suppose such a fable as that of the Apis not to have been carefully planned and digested beforehand; or any thing left undone to prepare the way for its reception. It must have been bruited abroad, and circulated in some manner or other through the length and breadth of the land, that at the full moon of one favoured month in this year, the month of Mecheir, the middle month of the year itself, the greatest of all their gods, to do honour to Memphis, to do honour to Shishak, to testify his regard and his affection for his chosen country in general, would be found to have united himself, or to have prepared the way for uniting himself, to another sacred bull in the person of the Apis; a bull destined to be his own representative, and the tutelary genius of Memphis, and the protector and guardian of Egypt in general, both in himself, and in a succession of types like himself, for ever.

It is not impossible that Jeroboam might still have been

* We shall see hereafter, we trust, that the stated date of the conception of the Apis in these last nine months of the cycle was the full moon of Tybi; the solar date of which was Mecheir 4. Mecheir 4 B. C. 974 æra cyclica 3033 answered to September 22 at midnight. There being a true full moon October 20 2·15 A. M. there was a mean full moon Sept. 20 13 h. 31 m. from midnight: and Sept. 19 at 18 hours being assumed to have been the lunar 15th, Sept. 21 at 18 hours, or Sept. 22 at midnight, Mecheir 4, would be the lunar 17th.

in Egypt past the month of October B. C. 974. But, whether or not, what was about to happen in that month, or in the preceding, and at a stated time in that month, known and expected every where else in Egypt, could not have been unknown and unexpected at the court of Shishak in particular. Besides the Apis had not only his day on which to be conceived, but his day on which to be born: and we have seen the same reason to fix the latter to the new moon of Athyr in the first year of the cycle, as the former to the full moon of Tybi or of Mecheir in the last. Æra cyclica 3034 B. C. 973, when Thoth 11 fell on May 1, the new moon of Athyr would fall on Athyr 10, and Athyr 10 on June 29.

Such important dates however as these of the conception or of the birth of the Apis in the first instance of all are not to be considered cursorily; and we are not yet in a condition to sift and examine them thoroughly. We have said enough to satisfy any reasonable and unprejudiced person that the rise of the fable of the Apis coming so near to the end of the reign of Solomon, when Jeroboam was certainly in Egypt and at the court of the reigning king, its principal and most characteristic circumstances could not fail to be known to him; and the first year of the first cycle itself coinciding with the first year of his own reign, no presumption could possibly appear more reasonable and more obvious beforehand than THIS; That the most important event in his personal history, almost the only event of a reign of 21 or 22 years which the Spirit of God thought proper to leave on record; the event which was followed by consequences so serious both to himself and to his family and to his subjects; the event which implicated all alike in a common criminality, and made all alike obnoxious to a common punishment; the event which earned for Jeroboam himself, within the particular sphere of his personal influence over a part of mankind, the unenviable distinction of the first author of sin to all mankind; the event which has branded his memory in the Scripture of truth itself as Jeroboam the son of Nebat who made Israel to sin: his setting up of the calves at Bethel and Dan, and his institution of the feast, devised by himself, at a set time of the year, in honour of

these idols, (more particularly of that at Bethel*;) should be found to have had something to do with the recently in-

* The allusions of later date to the two calves, which occur in Scripture, are the following:

i. Hosea (in the reigns of Uzziah, Jotham, Ahaz, and Hezekiah, and Jeroboam the second, king of Israel[a]): "Thy calf, O Samaria, hath cast *thee* off[b]... but the calf of Samaria shall be broken in pieces[c]."

"The inhabitants of Samaria shall fear because of the calves of Beth-aven: for the people thereof shall mourn over it, and the priests thereof *that* rejoiced on it, for the glory thereof, because it is departed from it.

"It shall be also carried into Assyria *for* a present to king Jareb:...

"The high places also of Aven, the sin of Israel, shall be destroyed: the thorn and the thistle shall come up on their altars[cc]"...

"Though thou, Israel, play the harlot, *yet* let not Judah offend; and come not ye unto Gilgal, neither go ye up to Beth-aven"[d]...

"Blow ye the cornet in Gibeah, *and* the trumpet in Ramah: cry aloud at Beth-aven, after thee, O Benjamin[e]."

"Gilead *is* a city of them that work iniquity[f]."

"*Is there* iniquity *in* Gilead? surely they are vanity: they sacrifice bullocks in Gilgal; yea their altars *are* as heaps in the furrows of the fields[g]."

"All their wickedness *is* in Gilgal: for there I hated them: for the wickedness of their doings I will drive them out of mine house[h]."...

"And now they sin more and more, and have made them molten images... they say of them, Let the men that sacrifice kiss the calves[i]."

"So shall Beth-el do unto you, because of your great wickedness[k]"...

ii. Amos (reign of Uzziah and of Jeroboam the second[l]): "Hear ye, and testify in the house of Jacob...

"That in the day that I shall visit the transgressions of Israel upon him, I will also visit the altars of Beth-el: and the horns of the altar shall be cut off and fall to the ground[m]."

"Come to Beth-el, and transgress; at Gilgal multiply transgression; and bring your sacrifices every morning, *and* your tithes after three years[n]."

"Then Amaziah the priest of Beth-el sent to Jeroboam, king of Israel, saying, Amos hath conspired against thee in the midst of the house of Israel: the land is not able to bear all his words[o]."

"And Amaziah said unto Amos, O thou seer, go, flee thee away into the land of Judah, and... prophesy there:

"But prophesy not again any more at Beth-el: for it *is* the king's chapel, and it is the king's court[p]."

"But seek not Beth-el, nor enter into Gilgal, and pass not to Beer-

[a] Hosea i. 1. [b] viii. 5. [c] 6. [cc] x. 5, 6. 8. [d] iv. 15. [e] v. 8. [f] vi. 8. [g] xii. 11. [h] ix. 15. [i] xiii. 2: cf. 1 Kings xix. 18. [k] x. 15. [l] Amos i. 1: vii. 9, 10–17: viii. 8–10: ix. 5. [m] iii. 13, 14. [n] iv. 4. [o] vii. 10. [p] 12, 13.

troduced worship of the Apis, and the recently instituted feast of the Apis, in Egypt. Let us then proceed to inquire

sheba: for Gilgal shall surely go into captivity, and Beth-el shall come to nought.

"Seek ye the LORD, and ye shall live: lest he break out like fire in the house of Joseph, and devour *it*, and *there be* none to quench *it* in Beth-el[q]."

"They that swear by the sin of Samaria, and say, Thy God, O Dan, liveth; and the manner of Beersheba liveth; even they shall fall, and never rise up again[r]."

iii. Micah (in the reign of Jotham, Ahaz, and Hezekiah[s]): . . ." What *is* the transgression of Jacob? *is it* not Samaria? . . .

"Therefore I will make Samaria as an heap of the field . . .

"And all the graven images thereof shall be beaten to pieces . . . and all the idols thereof will I lay desolate[t]."

We may infer from these different statements that the principal seat of the idolatrous worship, introduced by Jeroboam, was at Beth-el: and that consequently the Apis, as the more considerable idol in Egypt, was set up at Beth-el, and the Mneuis at Dan[u].

When it is observed, in the historical account of that act and of its consequences, "And this thing became a sin: for the people went *to worship* before the one, *even* unto Dan[w]:" this may be understood to mean only that they resorted not merely to Beth-el, which was much nearer for the greatest part of them, and the principal place of resort, but even to Dan, which was much further off. The tribes in the north of Judæa might naturally prefer to go to Dan: and Dan seems to be intended in the book of Tobit[x], where he speaks of the practice of his own family, and of the rest of the tribe of Zebulon, to which he belonged.

It is certain however that Beth-el from the first must have been the principal seat of the apostasy: that the *altar* of Jeroboam was erected *there;* that his feast was first observed there; that the chief settlement of the priests was there[y]; that the king's *chapel* was there, as Amos testifies; that the prophecy which denounced the apostasy on the very day on which it was first consummated was delivered at Beth-el in particular[z], and was fulfilled in the treatment of the altar at Beth-el in particular by Josiah[a].

We may collect too that the place, designated in the above allusions by the name of Beth-aven, is probably meant of Beth-el[b]; though there was a Beth-aven, not far from Beth-el too, in the tribe of Benjamin[c]. It means "House of idols," and it must be so understood in these instances.

We must infer also that in the course of time the worship of the calves

q Amos v. 5, 6. r viii. 14.
s Micah i. 1. t i. 5–7.
u 1 Kings xii. 29. w xii. 30.
x Tobit i. 4, 5.
y 1 Kings xii. 32, 33: xiii. 33.
z xiii. 1, 2. 32.
a 2 Kings xxiii. 15–18, 19, 20.
b Cf. Jeremiah xlviii. 13.
c Joshua, vii. 2: xviii. 12. Cf. 1 Sam. xiii. 5: xiv. 23.

whether this presumption is or is not confirmed by the matter of fact.

## SECTION IX.—*On the date of the feast instituted by Jeroboam, and on its relation to the first natales Apidis in Egypt.*

If the death of Solomon could not have happened before the spring of B. C. 974; the proceedings which ended in the separation of the kingdoms might not actually arrive at that consummation until proportionally late in the year. After this the preparations for the expedition against Jeroboam, made by Rehoboam[a]; and when that had been prevented by the message of the prophet Shemaiah, the building of strongholds on the frontiers of their respective dominions both by him and by Jeroboam[b]; (a precaution rendered necessary by the relations of the two kingdoms to each other from that time forwards, as well as by the hostile feelings of these two kings towards one another in particular[c], and one of the first things to be attended to;) we may take it for granted would occupy the whole of this year B. C. 974, until past the usual time of the feast of tabernacles at least. It is probable that none of the revolted tribes in a body would attend that

was established at Gilgal, Gilead, Samaria, and even Beersheba: and probably images of them erected there too. In Samaria consequently not before the time of Omri, the 6th king of Israel, the founder of Samaria; and most probably by him[d].

It is observable that, at the time of the capture of Samaria by Shalmaneser, there is no allusion to its calves[e], as if it had any *then*. Hosea had predicted that the calf of Samaria should be taken away and carried as a present to Jareb king of Assyria; and the kings of Israel being already tributaries to the kings of Assyria[f], that prophecy had been already fulfilled. Hoshea, the last king of Israel, is the only one of whom it is said at his accession, that though "he did *that which was* evil in the sight of the LORD," it was not as the kings of Israel had done before him[g]; that is, not in the same way of following the precedent set by Jeroboam.

The calf of Beth-el was probably removed to Assyria at the same time. At least, when the judgment so long before denounced against Beth-el was executed by Josiah, there is no mention of any thing as still remaining there, but the altar, and the high places[h].

[a] 1 Kings xii. 21, 22–24. 2 Chron. xi. 1, 2–4.
[b] 2 Chr. xi. 5–17. 23. 1 Kings xii. 25.
[c] 1 K. xiv. 30: xv. 6. 2 Chron. xii. 15.
[d] 1 Kings xvi. 24–26. Cf. 2 Kings xvii. 16.
[e] 2 Kings xvii. 3–23.
[f] Cf. 2 Kings xv. 29: xvii. 1–4.
[g] xvii. 2.
[h] xxiii. 15–20.

feast this year; and probably very few individuals from among them. We cannot therefore suppose that Jeroboam would either have occasion to prevent the resort of his subjects to Jerusalem this year, or even if he had occasion would have leisure to do so.

But the next year, B. C. 973, the state of the case would be different. By that time the political relations of the two kingdoms had settled down into the same state in which they appear to have continued all through the reigns of these first kings respectively; that is, neither a state of cordial peace, nor yet one of actual war, but of a still cherished, though inactive and inoperative, feeling of ill-will on both sides. In this year Jeroboam would have to decide whether he would trust implicitly to the truth of the Divine assurance that, if he and his children continued faithful to God, the kingdom should be continued to him and to them for ever[m]; or whether he should adopt such means to ensure the same end for himself, as worldly prudence and policy seemed most obviously to dictate. He decided as a worldly minded and politic prince might be expected to do; and worldly minded and political men, at first sight, might approve of his decision, and applaud the forecast and sagacity of his contrivance for the purpose which he had in view. And it must be admitted that he gained his end, by rendering the reunion of the kingdoms from that time forward an impossible contingency; but only by laying the foundation of a perpetual defection from God as well as from the house of David, and by setting the example of a crooked but specious and seemingly necessary policy, which even the best of the kings of Israel after him were still found imitating, in the same spirit of distrust of God and of reliance on their own wisdom and foresight, which had actuated him to adopt it at first: while as to himself, "in the next generation his name was clean put out," and his memory survived ever after only to share in the condemnation of the first author and instigator of sin[n].

Now this being the case, and such being the motive which

[m] 1 Kings, xi. 26–28. 29–39: xii. 15. 2 Chron. x. 15.

[n] 1 Kings, xii. 30: xiv. 16: xv. 26. 30. 34: xvi. 2. 26: xxii. 52. 2 Kings, x. 31: xiii. 2. 11: xiv. 24: xv. 9. 24. 28: xvii. 21, 22.

is represented in Scripture to have prompted this act of Jeroboam [o]; the first reflection which occurs, in reading the account of his apostasy, is that the very thing which he actually appears to have done, under the influence of this motive, was least to be expected from such a motive itself. The feast of tabernacles, against which his precaution was particularly directed, was celebrated on the 15th of the seventh month: the feast which "he devised of his own heart" to draw the people off from attending it, and to supersede it in their affections and their observance, was instituted in the eighth month and attached to the 15th of the eighth month [p]. There was a month's interval consequently between the two. Now the extent of the whole of Judæa, comprehending both kingdoms, was only such that a person on foot, and at the rate of an ordinary day's journey, might walk from Dan even to Beersheba in a week's time. There must consequently have been abundance of time every year for any of his subjects, who were so inclined, both to attend the feast of tabernacles at Jerusalem, at its stated season, and this feast of his at Bethel, at its stated season also.

We say then that the very precaution attributed to him from such and such a motive appears at first sight inconsistent with the motive itself. It was directed against a certain risk: and yet it is evident it did not preclude that risk: it left it as hazardous and as capable of occurring as before. What was more likely than that a wily and worldly-wise and totally unscrupulous prince, to make sure of his purpose, would have fixed his rival feast to the 15th of the seventh month? and so have rendered it absolutely impossible for any of his subjects, who might even have desired to do so, to attend the feast of tabernacles, without omitting to attend his feast too.

This consideration seems to have had so much weight with Josephus, and to have appeared to him so natural and obvious, that, if there is no error of reading in his text, he has actually perverted Scripture to make its account also consistent therewith; and has represented this feast of Jeroboam's as instituted in the seventh month [q], not in the eighth; con-

[o] 1 Kings xii. 26–33. 2 Chron. xi. 15. [p] 1 Kings xii. 32, 33.
[q] Ant. Jud. viii. viii. 5.

trary to the plain testimony of Scripture itself. Are we then to suppose that in choosing the eighth month, as the stated month for this new service, Jeroboam intended to leave it to the option of his subjects to attend either or both these feasts, as they should think best? or that he fixed upon the eighth month for this rival service from some sense of necessity, which would not allow him to do otherwise, even though at the risk of not preventing the attendance of his subjects at the feast of tabernacles? trusting only to the influence of his own recommendations and of his own example, and to the superior attractions of the new service itself; or even to the idea, which he himself inculcated on the people, that after all both services were the same, and in honour of the same object of worship; to get them to prefer this new feast to the feast of tabernacles. And what could this necessity be, but the fact that, as he was borrowing the objects of his worship from the Egyptians, so he was borrowing the feast in their honour from the Egyptians also; and that his superstition would not allow him to fix it in any but its proper month, whether that was the same with the stated month of the feast of tabernacles or not?

In order then to the further illustration of this point, we must compare the Israelitish or sacred calendar of this time with the Apis calendar of the Egyptians. The stated month of the feast of tabernacles in the former was Tisri; and the stated month of the *natales Apidis* in the latter, as we have seen, was Phamenoth: and Tisri was the seventh in the one, Phamenoth was the seventh in the other. Now this seems only to embarrass the question still more, instead of clearing it up: for it renders it only so much the more extraordinary that Jeroboam should not have fixed his own feast in honour of the Apis (if that was really its object) to the seventh month; not to the eighth.

But any two lunar calendars will differ in accidental circumstances; especially two such calendars as a Metonic calendar and an Apis calendar; the former of which is confined to a certain season of the year, the latter is not. Two such calendars could never agree except *per accidens*, and for a very short time. What then if the seventh month of the Apis calendar, in this first instance of all, really answered

to the eighth month in the calendar of the people of Israel? Could Jeroboam have any alternative in that case, except to fix a feast, specially intended in imitation of the *natales Apidis* of the time being, to the eighth month, and not to the seventh?

We present our readers with the scheme both of the sacred calendar, taken from our own Prolegomena[r], down to the eighth month or Marchesvan, B. C. 973, and of the first year of the Apis cycle, down to the seventh month or Phamenoth, æra cyclica 3034.

*Sacred Calendar.*

Period ii. Cycle xiv. 7.
B. C. 973. Dom. Lett. E. D.

| Months. | | Days. | | Midn. |
|---|---|---|---|---|
| i. | Nisan | 29 | April | 1. |
| ii. | Jar | 30 | —— | 30. |
| iii. | Sivan | 29 | May | 30. |
| iv. | Tammuz | 30 | June | 28. |
| v. | Ab | 29 | July | 28. |
| vi. | Elul | 30 | Aug. | 26. |
| vii. | Tisri | 29 | Sept. | 25. |
| viii. | Marchesvan | 30 | Oct. | 24. |

15 Marchesvan Nov. 7.
Feria 7ª or Saturday.

*Apis Calendar.*

Cycle i. year i.
Æra Cyclica 3034.

| Months. | | Days. | | Midn. |
|---|---|---|---|---|
| i. | Thoth | 30 | May | 1. |
| ii. | Phaophi | 29 | —— | 31. |
| iii. | Athyr | 30 | June | 29. |
| iv. | Chœac | 29 | July | 29. |
| v. | Tybi | 30 | Aug. | 27. |
| vi. | Mecheir | 29 | Sept. | 26. |
| vii. | Phamenoth | 30 | Oct. | 25. noon. |

8 Phamenoth Nov. 1. noon.
15 .. .. .. .. 8. noon.
Feria 1ª or Sunday.

We flatter ourselves that our readers have in this comparison of calendars both a sufficient explanation of the conduct of Jeroboam, and also a striking confirmation of each of these calendars, one the Israelitic or sacred, brought down to this point from the epoch of B. C. 1511, the other the Apis, now for the first time coming into existence.

Jeroboam intended his feast to combine the distinctive characteristics both of the Mosaic feast of tabernacles and of the Egyptian *natales Apidis*: and therefore he took the month from the one, and the day of the month from the other. The seventh month Phamenoth was inalienably appropriated to this service of the Apis in its own cycle; and therefore he could not dispense with that: the 15th of the month was just as inalienably appropriated to the feast

[r] Kalendarium Sacrum, p xxix.

of tabernacles; and therefore that must be retained also. The *natales Apidis* indeed began at the first dichotomy; as no feast of the Mosaic ritual did, except perhaps the feast of Pentecost: but they lasted to the fifteenth of the same moon: and when the mystical nature of this birthday is understood, it is perceived that the birth might be said to be only inchoate at the dichotomy, and to be complete only at the full, or on the fifteenth of the same lunar month. Besides which, there was one day's difference between the Apis *numeniæ* and those of the sacred calendar at this time; so that in strictness the 15th of Jeroboam's 8th month answered to the 14th of Phamenoth, and the two last days of the *natales* in the proper Apis cycle were the two first days in his feast of the eighth month.

It is further to be observed also that, as the Dominical Letters, B. C. 973, were E D, November 1 and 8, the first and last days of the first *natales Apidis* in their own calendar, were each the *feria prima*, or first day of the hebdomadal cycle. Indeed both the date of the ἔμβασις, Oct. 25, the date of the dichotomy, Nov. 1, and the date of the πανσέληνον, Nov. 8, which in the mystical construction of these things answered to the conception, to the birth, and to the maturity of the Apis respectively; all fell on the first day of the week. Whether this coincidence was purposely affected in the first arrangements of this kind, we cannot affirm for certain; but we think it very probable it was: for that the Egyptians were well acquainted with the hebdomadal cycle at this time, whether they actually used it or not, we entertain no doubt.

In like manner November 7—14 the first and last days of Jeroboam's feast, both fell on the *feria septima* or Sabbath: and that was a coincidence, which we may take it for granted *he* was very likely to regard on purpose; especially in the first instance of the kind. It will follow that the particulars related in the thirteenth chapter of the first book of kings, belonging to the first day of this first idolatrous feast of Jeroboam's, all took place on the *feria septima* or Sabbath too.

## SECTION X.—*Type of the first Apis cycle.*

We conclude with submitting to our readers the first type of this Apis cycle of the Egyptians, exactly as it seems to have come into being on this day Thoth 11 æra cyc. 3034, the *luna tertia*, May 1, B. C. 973.

*Apis cycle, Type i, Epoch, Thoth* 11 *Æra cyc.* 3034, *May* 1 *B. C.* 973.

| Solar cycle. | Lunar cycle. | |
|---|---|---|
| i | i | Thoth .... 11 |
| i | ii | Epagomene 5 |
| ii | *iii | Mesore.... 24 |
| iii | iv | Mesore.... 14 |
| iv | v | Mesore.... 3 |
| v | *vi | Epiphi .... 22 |
| vi | vii | Epiphi .... 12 |
| vii | viii | Epiphi .... 1 |
| viii | *ix | Paüni .... 20 |
| ix | x | Paüni .... 10 |
| x | xi | Pachon.... 29 |
| xi | *xii | Pachon.... 18 |
| xii | xiii | Pachon.... 8 |
| xiii | xiv | Pharmuthi 27 |
| xiv | *xv | Pharmuthi 16 |
| xv | xvi | Pharmuthi 6 |
| xvi | xvii | Phamenoth 25 |
| xvii | *xviii | Phamenoth 14 |
| xviii | xix | Phamenoth 4 |
| xix | xx | Mecheir .. 23 |
| xx | *xxi | Mecheir .. 12 |
| xxi | *xxii | Mecheir .. 2 |
| xxii | xxiii | Tybi...... 22 |
| xxiii | xxiv | Tybi...... 11 |
| xxiv | *xxiv | Chœac .... 30 |
| xxv | xxvi | Chœac .... 20 |

*Last nine months of the cycle.*

| Month. | Days. | |
|---|---|---|
| i | 30 | Chœac .... 20 |
| ii | 29 | Tybi...... 20 |
| iii | 30 | Mecheir .. 19 |
| iv | 29 | Phamenoth 19 |
| v | 30 | Pharmuthi 18 |
| vi | 29 | Pachon.... 18 |
| vii | 30 | Paüni .... 17 |
| viii | 29 | Epiphi .... 17 |
| ix | 30 | Mesore.... 16 |
| i | 30 | Thoth .... 11 |

## CHAPTER IV.

### *Verification of Type i of the Apis cycle by testimony.*

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SECTION I.—Cycle xiii. 1. Æra cyc. 3334 B. C. 673. *Date of the reign of Psammetichus.*

IT appeared from Pliny[s] that part of the ceremonial of the *natales Apidis* at Memphis consisted in throwing a phial of gold and a phial of silver into a particular locality of the Nile; called *Phiala* also, either from its resemblance to a goblet in shape, or from this ceremony, (which is the more probable explanation of the name.) It was to be collected from Seneca[s] too that a similar ceremony, and most probably at the same time, was performed at Philæ near Syene.

It is reasonable to suppose that these goblets were dedicated to the Nile, or to some divinity closely connected with the Nile; and that before they were thus cast into the Nile they had been consecrated by an act of religion; i. e. by offering σπονδαὶ or libations to the Nile from them. Moreover since it appeared from Seneca that this ceremony in his time was usually performed by the præfecti, that is, by the Roman governors for the time being, the lieutenants of Cæsar, the highest civil authorities in the land; it may be supposed that in time past, when Egypt had kings of its own, this ceremony was commonly performed by them.

In Herodotus' history of Egypt there is an hiatus, after his account of the last two kings, the Ethiopian, Sabacos[t], (the So of Scripture[u],) and Sethon the priest of Vulcan[x]; including between them the rest of the reign of the blind king Anysis[y]. The Egyptians did not choose to let him know the truth concerning this period of their history, B. C. 690—B. C. 670: during which, if we are not mistaken, their country was overrun and devastated by Esar-Haddon, the son and successor of Sennacherib; and No-Ammon, or Thebes, was carried into captivity; as it certainly had been before the time of the prophet Nahum[z]. It had been pre-

s Supra, p. 475. ch. i. sect. ii. art. v. x ii. 141, 142–147. y 137. 140.
t ii. 137–139. u 2 Kings, xvii. 4. z iii. 8–10.

dicted, through Isaiah the prophet, that Egypt should some time or other be given up to civil dissension, and civil war; city against city, and kingdom against kingdom[a]: and the prediction was fulfilled in this interval; and the fulfilment has transpired even by means of profane history itself, as appears from Diodorus[b]; who attests the fact of the anarchy, (though not a word is to be found in Herodotus relating to it,) and fixes its duration to two years. It ended at last in a compromise; that is in the election of twelve kings, one for each three of the nomes (the number of which was 36[c] in all). And this fact is attested by Herodotus[d]: though he does not explain out of what previous state of things so singular an appointment, and so unexampled in the history of Egypt before or after, as the joint reign of twelve kings at once, arose. The fact of such a result at last is itself a confirmation of the anarchy and confusion, and of the general dispute among the nomes for precedence or mastery, which must have led to it.

Herodotus mentions an oracle, supposed to have been given at Buto, the city of the Egyptian Latona[e] according to the Greeks, before the appointment of these kings; Τὸν *χαλκέῃ φιάλῃ σπείσαντα αὐτέων ἐν τῷ ἱρῷ τοῦ Ἡφαίστου τοῦτον ἁπάσης βασιλεύσειν τῆς Αἰγύπτου*: and he proceeds to relate how this prediction was fulfilled in the person of Psammetichus, one of the twelve; who ultimately became sole king[f].

The Grecian name of Hephaistos, in this allusion, is the Greek version of the name of an Egyptian idol, which in its own language was called Phtah, Ptah, or Phthah[g], Φθὰς, or Phthas. This Egyptian deity, according to Herodotus, was represented in the form of a pigmy; which he compares to the Παταϊκοὶ or figures sculptured on the prows of the Phœnician ships: Τοὺς *οἱ Φοίνικες ἐν τῇσι πρώρῃσι τῶν τριηρέων περιάγουσι .... πυγμαίου ἀνδρὸς μίμησίς ἐστι*[h]: and the still extant statues and sculptures of this Phthas answer to that description. The Greeks as we have observed made the name of Ἥφαιστος out of this of Phthah; or *vice versa*, the Egyptians the name

[a] xix. 2. [b] i. 66. (65.)
[c] Herod. ii. 164. Strabo, xvii. 1.
[d] ii. 247.
[e] ii. 147. 155. 152. Strabo, xvii. i.
[f] ii. 151–153.
[g] Birch's Egyptian Antiq. i. 14. Bunsen's Egypt, i. 382. sect. vi. A.
[h] iii. 37.

of their Phthah out of that of the Grecian Hephaistus: Ἕλληνες δὲ εἰς Ἥφαιστον μεταλαμβάνουσι τὸν Φθᾶ[i]. Now this Egyptian Hephaistus is said to have been the son of the Nile: Αἰγύπτιοι μὲν γὰρ Νείλου γενέσθαι παῖδα Ἥφαιστόν (φασιν)· ὃν ἄρξαι φιλοσοφίας[k]—Vulcani item complures...secundus in Nilo natus, Phthas, ut Ægyptii adpellant, quem custodem esse Ægypti volunt[l]—Ἥφαιστοι τέσσαρες ... δεύτερος Νείλου παῖς, ὃν Αἰγύπτιοι καλοῦσι Φθάν[m].

It is agreed that this Phthas was worshipped at Memphis in particular, and that his principal temple was there. Hence in Suidas: Φθὰς, ὁ Ἥφαιστος, παρὰ Μεμφίταις. The most observable circumstance however is that even in Memphis his temple was so close to that of the Apis, that they could scarcely be said to be distinct[n]; though the proper name of the one was Ἀπίειον and that of the other Ἡφαίστειον. These two divinities were strictly contemplar, and ὁμώροφοι.

There was no divinity in the masculine form, worshipped in Egypt, the first conception of which is not ultimately to be resolved into that of their Osiris, except perhaps their Amoun; the concealed or invisible principle: and no female divinity in like manner, which was not at bottom only a different conception of their Isis. This being the case, the Apis and the Phthas of the Egyptians, both bearing a common relation to Osiris, were predisposed to coalesce with each other: and forasmuch as this Phthas in particular was not only, like Osiris, the guardian of Egypt in general, but the son of the Nile also, and born of the Nile, as all Egypt itself might be said to have been; nothing could be more probable *a priori*, than that the ceremony of the phials, though performed at the *natales Apidis*, was intended in honour of this Phthas, the son of the Nile and warden of Egypt; to whom the popular mythology ascribed both the production and the conservation of the land of Egypt. It is not said that these phials were offered to the Apis; but it is said that they were cast into the Nile at the time of his *natales*; and therefore must have

i Iamblichus, De Mysteriis, sect. viii. cap. iii. 159. l. 11. Cf. Porphyry, apud Eusebium, Præp. Evang. iii. xi. § 23. § 46.

k Diogenes Laertius, Procem. i. 1.

l Cicero, De Natura Deorum, iii. 22. § 55.

m Lydus, De Mensibus, iv. 54. 91. l. 9.

n Herod. ii. 153: Strabo, xvii. 1.

been offerings to the Nile, or to some principle closely related to the Nile; as this Phthas, the reputed son of the Nile, undoubtedly was.

Now it appears from Herodotus[n] that when these twelve kings had reigned a certain length of time in amity and concord; which according to Diodorus was 15 or 16 years; they met together at last in the temple of Phthas at Memphis, on some occasion which required each of them to make a libation to him from a phial of gold; but the priest of Phthas having inadvertently brought out eleven phials for that purpose instead of twelve, Psammetichus, not reflecting on what he was about to do, nor thinking of the oracle at the time, made use of his helmet instead of a goblet, to perform his part of the ceremony. *Τῶν δὲ δυώδεκα βασιλήων δικαιοσύνῃ χρεωμένων, ἀνὰ χρόνον ὡς ἔθυσαν ἐν τῷ ἱρῷ τοῦ Ἡφαίστου, τῇ ὑστάτῃ τῆς ὁρτῆς μελλόντων κατασπείσειν ὁ ἀρχιρεὺς ἐξένεικέ σφι φιάλας χρυσέας, τῇσίπερ ἐώθεσαν σπένδειν, ἁμαρτὼν τοῦ ἀριθμοῦ, ἕνδεκα, δυώδεκα ἐοῦσι. ἐνθαῦτα ὡς οὐκ εἶχε φιάλην ὁ ἔσχατος ἑστεὼς αὐτέων Ψαμμήτιχος, περιελόμενος τὴν κυνέην ἐοῦσαν χαλκέην, ὑπέσχε τε καὶ ἔσπενδε.*

Now it is here to be observed that this ceremony is said to have been going on *τῇ ὑστάτῃ (ἡμέρῃ) τῆς ὁρτῆς*. Therefore the festival had lasted more than one day; and the *natales Apidis* lasted seven days. This does much to identify this particular ceremony with the last day of the *natales*. It appears to us therefore a very probable conjecture, that in all these circumstances laid together we have strong internal evidence of an occasion when the *natales Apidis* must have been going on; consequently of an Apis cycle, which must have coincided very nearly with the end of the joint reign of these twelve kings, and with the beginning of the sole reign of Psammetichus; for that Psammetichus became sole king soon after this particular occurrence, there cannot be any reasonable doubt[o].

The beginning of the reign of Psammetichus, according to Herodotus, may be determined with approximate certainty by reckoning back from the middle of B. C. 525, the end of the reign of Amasis. He assigns 44 years to Amasis[p]: 25

n ii. 151. 147—150. Cf. Diodorus, i. 66.

o Herod. ii. 151—153.

p Ibid. iii. 10.

to Apries[q], the king before him: 6 to Psammis[r]: 16 to Neco[r]: and 54 to Psammetichus[s]: all together amounting to 145 years. He seems to have meant these in each instance of years complete: so that, if Amasis died B.C. 525 *medio*, Psammetichus must have begun to reign B.C. 670 *medio*.

The first Apis cycle being dated Thoth 11 æra cyc. 3034, May 1, B.C. 973, the 13th would bear date Thoth 11 æra cyc. 3334 Nab. 75. Feb. 18 B.C. 673. The stated date of the *natales* in that cycle, Phamenoth 15, would fall on August 20: and the last day of the ceremony on Phamenoth 22, or August 27. Now it appears from Herodotus[t] that when the colleagues of Psammetichus became aware of what he had done, and of the fulfilment of the oracle thereby, they did not put him to death, because he had not acted designedly; but they banished him to the marshes[u]; which had served as an asylum to the blind king Anysis, during the 50 years' reign of Sabacos, the place of whose concealment there was the island of Elbo. No doubt Psammetichus was relegated to this island also. But why was he banished to the marshes at all? At the end of August, (that is, at this very time,) when the inundation was at its height, the rest of Egypt would be under water; and this island of Elbo might be the only place to which Psammetichus could have been banished conveniently.

Now though Psammetichus is said to have resented this treatment at the time, and to have conceived the design of rebelling against his colleagues[x], it is clear that he did not take any steps towards the execution of his intention until he had consulted the oracle at Buto; and by that he was told to wait for the arrival of brazen men from the sea[x]; which the event shewed to be meant of Grecian mercenaries, Ionians and Carians, sailing at the time on a piratical expedition, and obliged by stress of weather to land on the coast of Egypt.

If this adventure did not happen between August 27 B.C. 673 and the autumnal equinox the same year; it could not

[q] Herod. ii. 161.
[r] Ibid. 159.
[s] Ibid. 157.
[t] Ibid. 151.
[u] Cf. Herod. ii. 137. 140.
[x] Ibid. 152.

have happened at the earliest before the summer of B. C. 672: for at this time of day the sea was universally considered to be shut at or soon after the autumnal equinox, and not to be open again until some time after the vernal. The actual arrival of these mercenaries then on the coast of Egypt could not be earlier than B. C. 672: but even in that case, it is not to be supposed that the eleven kings would submit without a struggle. One year's campaign or even more might be necessary to decide the contest. Polyænus reports that the name of the king dethroned by Psammetichus with the aid of his Grecian auxiliaries was Tementhes[y]: and this being only one out of eleven, we may presume it must be meant of the last who was actually defeated by him. Now this brings us at once to B. C. 670 or B. C. 669—the very year in which Herodotus himself appears to have dated the beginning of the reign of Psammetichus.

We think then we cannot have been mistaken in supposing that the occasion on which the twelve kings were all assembled in the temple of Phthas at Memphis was that of the *natales Apidis,* in the first year of the xiiith cycle, Phamenoth 15–22, æra cyc. 3334, Nab. 75, August 20–27, B.C. 673; only three years, or four at the utmost, before the beginning of the sole reign of Psammetichus. We think too that the particular day of their meeting was that of the last of the *natales*, Phamenoth 22, August 27, the stated date of the offering to Phthas or the Nile; which could be performed by none but them.

Psammetichus, on this principle, might be said to have owed his elevation to the throne at last, without a rival or colleague, to the favour of the Apis and of Phthas, declared in this remarkable manner. And he seems to have thought so himself: the first act which Herodotus relates of his reign, after he had become sole king, being his enlarging and decorating the temple of Phthas, by the addition to it of Propylæa on the south; and his building an *αὐλὴ* or stabulum for the Apis, over against these same Propylæa, *πᾶσάν τε περίστυλον ἐοῦσαν καὶ τύπων πλέαν*[z]: this *αὐλὴ* being intended for its reception as often as it appeared; that is, as soon as it was to be consecrated and installed by the ceremony of

[y] vii. iii. Psammetichus. [z] ii. 153. Cf. Diodorus, i. 67.

the *natales*; and being still used for that purpose in Herodotus' time, as may be inferred from his words, *ἐν ᾗ τρέφεται ἐπεὰν φανῇ*.

Section II.—Cycle xvi. 6; Æra Cyc. 3413–3414, Nab. 154–155, B. C. 594–593. *Date of Ezekiel* viii. 1–18.

The prophecies recorded in the book of Ezekiel are dated in the years of his own captivity, which coincided with that of Jehoiachin also [b]; the son and successor of Jehoiakim. The date of this was B. C. 598; and, as it may be collected from various circumstances, sometime in Nisan that year, between March 24 at 18 hours and April 22 at 18 hours; which month entered on the feria 7ª or sabbath, dated from sunset.

No point in the chronology of the Old Testament can be more certainly proved than this; and what we are about to bring under the notice of our readers, respecting a particular instance of this mode of dating and reckoning the years both of Ezekiel's own and of Jehoiachin's captivity, is sufficient to illustrate and to establish his rule in every case of the same kind in general.

The call of Ezekiel took place in the fifth year so dated [c], B. C. 594. It may be demonstrated from the comparison of the parts of his prophecy, comprehended between ch. i. 1, and viii. 1, with each other, that his call being dated on the fifth of the fourth month, B.C. 594, Tammuz 5, June 11, a Friday [d], the remarkable command that he should lie 390 days on one side, in order to carry the sins of Israel in that posture, and 40 days on the other, to carry the sins of Judah in that [e], 430 days in all; was given him seven days afterwards [f], on Friday, June 18, Tammuz 12: and beginning to be fulfilled first at *even* on that day, or Tammuz 13, June 19, at midn. Saturday, B. C. 594, it lasted 430 days, to Ab. 29, Aug. 23, Wednesday, B. C. 593.

Now it appears from ch. viii. 1, that it was already over, at the opening of that chapter; the date of which was Elul 5 this very year. Let any one however calculate the interval in a lunar calendar between the 13th of the fourth month in

[b] 2 Kings xxiv. 11, 12; 2 Chron. xxxvi. 9, 10.

[c] i. 1, 2.

[d] i. 1, 2, 3: (cf. viii. 1: xi. 24: x. 15. 20–22: xliii. 3.); i. 1–3: iii. 13–15.

[e] iv. 1–8.

[f] iii. 15, 16; cf. 24, the eve of the sabbath.

one year, and the fifth of the sixth in the next; and say whether that could possibly amount to 430 days, except on *one* supposition; viz. that there was one month in the course of this interval more than usual, that is an intercalary month.

| | |
|---|---|
| i. From Tammuz 13, B. C. 594, to Tammuz 13, B. C. 593, in a common year there would be - - | 354 days. |
| From Tammuz 13, B. C. 593, to Elul 5, would be | 51 |
| | 405 days. |

And this would be 25 days less than 430, the interval necessarily required from Tammuz 13, B. C. 594, to Elul 5, B. C. 593.

| | |
|---|---|
| ii. From Tammuz 13, B. C. 594, to Tammuz 13, B. C. 593, in an intercalary year, there would be - | 384 days. |
| From Tammuz 13, B. C. 593, to Elul 5, there would be - - - - - - - | 51 |
| | 435 days; |

which is five days more than the necessity of the case would require.

On this principle the 430 days, devoted to the purpose and passed in the manner supposed, might actually have begun a week after the call of Ezekiel, Tammuz 13, B. C. 594; and yet be actually over, and the prophet be again at liberty for any other purpose, five days before Elul 5, B. C. 593; when it appears from his own testimony that he was actually at liberty. In this case however the lunar interval from Tammuz 13, B. C. 594, to Elul 5, B. C. 593, in some part of the period or other must have been intercalary. And according to our calendar of the sacred year of this time, it was so: for B. C. 594–593 in that answers to Period iv cycle ii. *6–7; that is, the interval, from Nisan 1 B. C. 594 to Nisan 1 B. C. 593, answered to the sixth year; and by the rule of the cycle at this period the sixth year was intercalary.

We have thought it only proper to begin with pointing out this coincidence, in order to shew beforehand that we have rightly assumed the cardinal date of Ezekiel's prophecies, B. C. 594; and have also good and sufficient grounds for the reliance which we place on our own calendar of the sacred year; one verification of which we have produced already. Another is supplied by this coincidence. A third, as

strong and as decisive as either of these, if not even more so than either, will be supplied by what we are about to shew.

This chapter of Ezekiel then being dated by himself in the sixth year, in the 6th month, on the fifth day of the month, its date in the sacred style was Elul 5, B. C. 593; in the Julian, August 28, the same year: for the first of Nisan that year bore date March 29 at 18 hours, or March 30 at midnight: and therefore the first of the sixth month, Elul, August 23 at 18 hours, or August 24 at midnight. The Dom. Lett. of the year being B A, August 28 was the *feria secunda*, or Monday: but there is nothing discoverable in the chapter, not even in the resort of the elders to Ezekiel on that day, mentioned in ver. 1, to imply that it opened on the sabbath.

Such then being the date of this chapter, and of every thing recorded in it, it appears that whether, (as in the case of St. Paul [g],) in the body or out of the body, yet with the same consciousness and perception of absolute reality in this instance as in that, Ezekiel was transported from his own home [h] by the river of Chebar [i] to Jerusalem [j]; in order that he might see with his own eyes, and bear witness, from his personal observation and personal consciousness of them, to the abominations and provocations of various kinds which were going on at this very time, and on this very day, in and about the temple there.

The first thing which he saw was the image of jealousy, in the gate leading to the altar [k]; the nature of which is not more particularly explained. We may infer however that this was something peculiar to the Jews; something set up by them instead of the proper object of their own worship: but the day being neither a sabbath, nor a new moon, nor any of the stated feasts, no act of worship appears to have been going on about this image at the time; only that it was bodily *there*; in the very way of the gate leading to the altar; an abomination or image, provoking to jealousy, on the threshold of the sanctuary itself.

The next thing which he saw was seventy ancients, i. e. elders, of the house of Israel, offering incense in censers, in a subterraneous chamber; the walls of which were covered

g 2 Cor. xii. 2, 3. h viii. 1–4. i Cf. i. 1–3: iii. 11, 12–16: 22–24. j viii. 3–6. k viii. 3–6.

with pictures or likenesses of such natural objects, both reptiles and animals, as were notoriously esteemed sacred, and were notoriously treated with divine honours, in Egypt[l]. Over these elders there was one presiding whom the vision has designated by name, Jaazaniah the son of Shaphan: no doubt a Jew, and well known at the time; probably of the line of the priests; but now acting as high priest in the ceremonial of these forbidden rites.

The next thing which he saw were women weeping for Tammuz; sitting at the door of the north gate of the temple[m]. Tammuz or Thammuz was the Syrian name of that person of ancient mythology who was known to the Greeks and to the Romans only by the name of Adonis. These women were celebrating the rites of Tammuz, (that is, the Adonia,) at the door of this gate of the temple; yet no doubt they were Jewish women: and these rites, wheresoever and whensoever they were celebrated, always began with "weeping."

The last thing which the prophet saw were 25 men, with their backs turned to the temple, and their faces looking to the east, worshipping the sun[n]. These were Israelitish disciples of Zoroaster; Magians among the Jews; as the Parsees would be among Mahommedans or Christians at the present day: and they were now engaged in an act of forbidden adoration, addressed to the Persian Mithras, whose visible type and impersonation was the sun. Nor does anything imply this more significantly than the apparently slight allusion in verse 17; from which we learn that they must have had branches or sprigs of some kind in their hands, which they were holding up to their noses, while they were performing this very act of worship to the sun: for that was an infallible criterion of the disciples of Zoroaster, and of the Magian rule of prayer and adoration; as we hope to shew on a future occasion. And from this part of the vision, in particular, we may justly infer that the time when these things were going on, and when they were thus revealed to the prophet Ezekiel, must have been as nearly as possible sunrise: for the Persian day at this time, especially the liturgic or ritual day, began at and was reckoned from sunrise;

l viii. 6–12. m viii. 13–15. n Ib. 16–18.

and no time was considered so proper and becoming for paying this tribute of adoration to the sun, as that of its first appearance above the horizon in the act of rising.

Now, when this Julian date of August 28, B. C. 593, Elul 5, in the 6th year of Ezekiel's captivity, is reduced to the Syrian calendar, it is found to fall on the stated day of the rites of Tammuz. There was it is true more than one type of this calendar in existence at this time; and each of these had a Tammuz month; and in each of these the rites of Tammuz were celebrated on the first day of this month: and from the nature of the case, though this Tammuz month and this Tammuz day might sometimes be coinciding in different calendars, they could not always do so.

But there were two types of this kind in each of which the rites of Tammuz, B. C. 593, fell on the same Julian date August 28: one of them the calendar of Gaza, the nearest to Jerusalem perhaps of all, the other the calendar of Byblus; more remote indeed from Jerusalem, but of all the most sacred, in connection with the rites of Tammuz, because the oldest in Phœnicia itself, and that to which they had been first attached. It is morally certain that these Jewish votaresses of the Phœnician Tammuz, some of the women of Jerusalem, were celebrating his characteristic rites at this time according to the proper rule of one of these calendars; most probably that of Byblus: though it makes no difference to the coincidence of the day with August 28, and with Elul 5, whether it was the calendar of Byblus or the calendar of Gaza.

It is observable however that they were *women* of Jerusalem who were so engaged at this moment; and not *men*. The history of the Adonia in every part of the ancient world demonstrates that, among all the fabulous conceptions of the mythology of old, and all the objects of the idolatrous reverence of antiquity, none was so popular with the softer sex, none interested their sympathies so deeply, none seems to have been so exclusively claimed by the women of ancient times, as Adonis. Where is the allusion in the remains of the ancient comedy to the ἀδωνιάζοντες? whereas to the ἀδωνιάζουσαι, as every one knows, the allusions are common. Theocritus' xvth idyll is entitled Ἀδωνιάζουσαι: and the women bear the chief if not the only part in that. It is not

without reason that Milton observes of this fable, the invention of Cyprus indeed, but speedily adopted in Syria, and nowhere in Syria more completely naturalized and more solemnly commemorated than at Byblus in Phœnicia,

> The love tale
> Infected Sion's daughters with like heat.

There is consequently an unquestionable propriety, such as is the characteristic of truth alone, in this representation of the rites of Tammuz as celebrated at this time by the women of Jerusalem only.

In like manner, when the same dates are reduced to the Persian calendar, they are found to fall on the 8th day of the seventh month: wherein we remark a double coincidence of a peculiar kind: first, that this 8th day in every month was a Persian sabbath, of which there were four in every month, the 1st, the 8th, the 15th, and the 23rd: secondly, that this 8th day in the seventh month, sabbatic at all times according to rule, was the calendar date of the autumnal equinox; just 186 days from the *first* of the first month, the calendar date of the vernal equinox: and that coincidence consecrated this month to the sun, or Mithras. Moreover, the Persian title of this 8th day in every month, was Deybadûr; that is, the name of Dey, the Supreme Principle, compounded with the name of that one of the four principal Izeds, who was supposed to preside over the element of fire in particular; of which the sun was the most vivid and sensible type.

With regard to the rites, revealed to the eye of the prophet in the act of being celebrated by the 70 elders, in the subterraneous chamber, the walls of which were covered with Egyptian devices and emblems of various kinds; we cannot doubt that these elders must have been Jews, addicted to the superstitions not of Syria or of Persia at this time, but of Egypt. Such adyta, crypts or vaults, as this subterranean chamber, are described by the ancients as peculiar to the more secret and mysterious ceremonies of idolatry every where: and chambers, which would correspond to this representation in Ezekiel, have been discovered among the monuments of Egypt at the present day. The number of these men is something remarkable. It appears to be limited to 70: but it is clear that, including their superintendent or

director himself, it must have amounted to 71 at least; from which we may infer that the actual number was 72, stated at 70 merely, according to a very common idiom of the Hebrew language[o]. And though this number of 72, from the time of the institution of the Sanhedrim in the wilderness by Moses, might appear to be eminently and peculiarly Jewish; yet we may collect from Horapollo that it was quite as much Egyptian as Jewish; and in some manner or other too, in Egypt, was associated with the moon.

The Cynocephalus was a type of the moon; and yet, according to Horapollo, it was a type of the *οἰκουμένη* or habitable world also, for the following reason; which we will give in his own words[p]: *Σελήνην δὲ γράφοντες ἢ οἰκουμένην . . . κυνοκέφαλον ζωγραφοῦσι· σελήνην μὲν . . . οἰκουμένην δὲ, ἐπειδὴ ἑβδομήκοντα δύο χώρας τὰς ἀρχαίας φασὶ τῆς οἰκουμένης εἶναι. τούτους δὲ,* (dog-apes,) *τρεφομένους ἐν τοῖς ἱεροῖς καὶ ἐπιμελείας τυγχάνοντας, οὐ, καθάπερ τὰ λοιπὰ ζῶα ἐν ἡμέρᾳ μιᾷ τελευτᾷ, οὕτω καὶ τούτους· ἀλλὰ μέρος αὐτῶν καθ' ἑκάστην ἡμέραν νεκρούμενον ὑπὸ τῶν ἱερέων θάπτεσθαι, τοῦ λοιποῦ σώματος ἐν τῷ κατὰ φύσιν ὄντος· ἕως δ' ἂν αἱ ἑβδομήκοντα καὶ δύο πληρωθῶσιν ἡμέραι, τότε ὅλος ἀποθνήσκει* (forsan *ὅλους ἀποθνήσκειν*).

Every one must be struck by the resemblance of this tradition to the Scriptural account of the division of the world among the three families of the sons of Noah; the individuals in which all together are always so represented by the commentators of antiquity as to make up the number of 72 exactly[q]. Nor should we have any right to assume that a belief to this effect among the Egyptians must necessarily have been borrowed from any other quarter; and not have been handed down among them too by a primitive tradition. It connects the number 72 with Egyptian superstition. And this number was certainly sacred among them to peculiar purposes. The greatest and most elaborate as well as most expensive kind of embalment among them lasted 70 days, probably 72 days[r]. This was the term of mourning for the death of their kings: after which—*τὰ δ' ἱερὰ συνέκλειον καὶ τὰς*

[o] See our Dissertations on the Principles and Arrangement of an Harmony of the Gospels, vol. ii. p. 6, 7. Diss. xv.

[p] i. 14.

[q] See our Exposition of the Parables, vol. v. 150. Appendix, ch. vii: Dissertations, vol. ii. 93, 94. Diss. xvi.

[r] Herod. ii. 86, 87, 88. Cf. Diodor. i. 91.

*θυσίας ἐπεῖχον καὶ τὰς ἑορτὰς οὐκ ἦγον ἐφ' ἡμέρας ἑβδομήκοντα καὶ δύο*[s]. It might well therefore be a stated rule of the service of the Apis, that on greater and more solemn occasions 72 of his priests should all at once be concerned; either from respect to that number itself, or as representatives of the *οἰκουμένη* or whole habitable part of the terraqueous globe; or perhaps for a still more esoteric reason, which does not appear to have been known to Horapollo, but is the most likely of all to have been the truth; viz. that the Apis was the representative of the moon, yet of the moon in relation to the earth; and the moon, according to Plutarch[t], in the opinion of the Egyptians was the 72d part of the earth.

We do not indeed know what stated days in the lunar month were sacred to the Apis; though there is every reason to believe that there were such days; and none more probably so than the new moons and the full moons of every month. It is certain at least that among the Jews the new moons were sacred by divine appointment; that is, special sacrifices were provided for them: but it does not appear that, with the exception of the new moon of Tisri, (the feast of trumpets,) they were ordained to be kept as sabbaths. These Jewish worshippers of the Apis would no doubt transfer the rule of their own calendar and of their own ritual in this respect to his, (if indeed there was any difference in that respect between theirs and his;) and would treat the new moons as sacred in the Apis ritual as much as in their own.

Now it is clear that they were not celebrating such mysteries in the concealment of this chamber underground, surrounded by Egyptian devices and hieroglyphics, according to their own calendar; because the day was the fifth of the month in that, not the first: and it was not even a sabbath, to make it sacred according to the Jewish rule. According to what calendar then could they be celebrating them? and by what calendar could Egyptian rites like these be celebrated but the Egyptian? It may be objected however, if the Jewish date was the 5th of the month, what could there be to distinguish that day in a lunar calendar of any kind? To this we answer, that the *numeniæ* of the Apis calendar

s Diodor. i. 72.

t De facie in orbe Lunæ, xix. Cf. Bailly, Astronomie Ancienne, vi. § xvi. 174.

itself were now falling on the 5th of the lunar month; and had been doing so ever since B. C. 728: the *numeniæ* of the sacred calendar in this year, both of the period and of the cycle, were absolutely true to the moon. The 5th of any of these months then at this time must have been the first of the corresponding Apis month; and *vice versa*, the first of an Apis month at this time must have been the fifth of the corresponding month in the sacred calendar.

Let us then proceed to compare the Jewish calendar, B. C. 593, from Nisan 1 to Elul 5, with the Apis calendar æra cyc. 3413–3414, Nab. 154–155, B. C. 594–593.

*Apis Calendar.*

Cycle xvi. 6.
Æra cycl. 3413. Nab. 154.
——— 3414. —— 155.

Epoch Epiphi 22. Æra cyc. 3413.
Nab. 154.
Dec. 6. B. C. 594.

| Mon. | Days. | | | | Midn. | B. C. |
|---|---|---|---|---|---|---|
| i. | 30 | Epiphi | 22 | Dec. | 6 | 594 |
| ii. | 29 | Mesore | 22 | Jan. | 5 | *593 |
| iii. | 30 | Thoth | 16 | Feb. | 3 | |
| iv. | 29 | Phaophi | 16 | March | 4 | |
| v. | 30 | Athyr | 15 | April | 2 | |
| vi. | 29 | Chœac | 15 | May | 2 | |
| vii. | 30 | Tybi | 14 | May | 31 | |
| viii. | 29 | Mecheir | 14 | June | 30 | |
| ix. | 30 | Phamenoth | 13 | July | 29 | |
| x. | 29 | Pharmuthi | 13 | Aug. | 28 | |

1 Pharmuthi Aug. 28.

*Sacred or Jewish Calendar.*

Period iv. Cycle ii. 7.
B. C. 593.

| Mon. | Days. | | Midn. |
|---|---|---|---|
| i. | 29 | Nisan | Mar. 30. |
| ii. | 30 | Jar | April 28. |
| iii. | 29 | Sivan | May 28. |
| iv. | 30 | Tammuz | June 26. |
| v. | 29 | Ab | July 26. |
| vi. | 30 | Elul | Aug. 24. |

5 Elul Aug. 28.

It thus appears that the first of the lunar Pharmuthi, in this year of the Apis cycle, did actually correspond to the fifth of Elul in the Jewish calendar; both coinciding with August 28. The coincidence therefore is as complete in this instance as in the other two, which have been already pointed out. And as they all concur to establish the fact that the same Julian term August 28, in the same year, B. C. 593, was corresponding at one and the same moment to the 5th of the sixth month in the sacred calendar, Period iv. cycle

ii. 7; to the first of the tenth month in the Apis calendar, cycle xvi. 6; to the 8th of the seventh month in the Persian calendar; and to the 1st of the first month in the Syrian; and through the Egyptian date to a day sacred to the Apis, through the Persian to a day sacred to Mithras, through the Syrian to a day sacred to Tammuz: we want no other voucher for the authenticity of each of these calendars, and for the verification and confirmation of all our assumptions, but this fact itself.

## SECTION III.—Cycle xix. i. Æra cycl. 3484. Nab. 225. B. C. 523.

### *Cycle of the time of Cambyses.*

It appeared from Herodotus [u], as we have already seen, that the Apis was even then at Memphis when Cambyses compelled the priests to produce it in his presence. Consequently the manifestation of the Apis, to which he alluded just before [u] could not be meant of the birth of the Apis, or of his first recognition after his birth, but solely of his consecration and installation; that is, of his *natales:* the manifestation and recognition which was made of him by that ceremony itself. The Apis itself was never in Memphis until the time of that ceremony was come. Till then the place of its abode was Nilopolis.

It appeared further that Cambyses must have got back to Memphis even before the proper time of the ceremony was arrived: Ἀπιγμένου δὲ Καμβύσεω ἐς Μέμφιν ἐφάνη . . . ὁ Ἆπις [u]. And had not that been the case, it would not have been so obvious and natural an inference that the public rejoicings of the Egyptians, which always ushered in and accompanied the *natales Apidis,* were so many demonstrations of joy and satisfaction on their part for the failure of the expedition against Æthiopia; which it appears was the construction which Cambyses himself put upon them.

Now the stated date of these natales has been ascertained; Phamenoth 15–22: and as Thoth 1 Nab. 225 fell on Jan. 1, B. C. 523, Phamenoth 15 fell on July 14, and Phamenoth 22 on July 21. On the first of these days the *natales* must have begun; though they were not permitted to continue until

[u] iii. 27.

the last; for the festival was terminated abruptly by the violence of Cambyses [x]. This however is of no importance. The important conclusion deducible from these premises is that Cambyses was already at Memphis, returned from his Æthiopic expedition, on July 14, B.C. 523. Let us proceed to inquire how far this conclusion will tally with the circumstances left on record concerning the expedition itself.

It appears [y] that when he had got as far as Thebes on his way he detached a part of his army (50,000 men) against the temple of Jupiter Ammon: of which nothing was ever known more, except that they had marched as far as the Oasis, on the way to their destination, seven days' journey from Thebes [z]; and consequently within three days' journey of the temple [a]. The most probable explanation of their fate is that which Herodotus himself suggests: that they were overwhelmed by the sands of the desert. But the exciting cause of this tempest of sand is said to have been the south wind: and herein others of the ancients agree with Herodotus [b]. Aliquando Cambyses, says Seneca [c], ad Ammonem misit exercitum; quem arena austro mota et more nivis incidens texit, deinde obruit. Add to this the pestilential or suffocating properties of these south winds of the desert, which are now known by the name of the Simoom: properties with which the ancients were well acquainted [d].

The most important observation however to the present question, which can be made on these winds, is that they had a stated season for their beginning to blow; and a stated interval during which they continued to blow. In the calendars of the east, (the solar or the lunar indifferently,) from time immemorial, the beginning of these winds appears to have been dated May 17, and the termination June 26: the interval, for which they blew, being the 40 days between. And this must be understood of their blowing in something like a regular and continuous manner; not simply irregularly, and by fits and starts.

x Herod. iii. 29. cf. 33. 64.
y Ibid. iii. 25, 26.
z Ibid. iii. 26.
a Ibid. iv. 181.
b Plutarch, Alexander, xxvi. Justin, i. 9. § 3.
c Natural. Quæst. ii. 30. § 2. Opp. v.
d Diodorus, iii. 48. Theophrastus, De Ventis. Dissertations on the Principles and Arrangement of an Harmony, iii. 18. Diss. xxxiv.

The most particular account of these winds indeed is given by Prosper Alpinus[f], from his own observation during a residence in Egypt of four years; and from this it appears that they were liable to blow, at different times, all through the months of March, April, May, and until the middle of June; sometimes for several days in succession: that they ceased only at the summer solstice: that the cessation of these hot winds from the south was soon followed by the setting in of the cool, the refreshing, and salubrious winds from the north, known to the ancients by the name of Etesiæ; which continued to blow for the greatest part of the summer: that the Egyptians in his time called these winds the Campsine or Champsine winds, either from a numerical term in their language, denoting 50, and intended of the time for which they lasted, or, as he was himself inclined to believe, meaning the same thing by this name as the Cambysine winds; as if tradition had constantly handed down among them the recollection of the fact that to these winds was to be attributed the destruction of the army of Cambyses, and the defeat of his attempt on the temple of Jupiter Ammon; and had stamped them with his name accordingly. If however there is such a term in the Egyptian language, as Campsine, denoting 50, we should consider that to be the true explanation of the name; the experience and observation of the east, from time immemorial, with respect to these winds, being such as we have stated; viz. that they commonly began about 50 days after the vernal equinox, and lasted 40 days; that is, until the summer solstice.

The winds which overwhelmed the detachment of Cambyses however were probably not the regular Campsine winds, those which thus set in about 50 days after the equinox; and therefore we cannot suppose this force to have been dispatched against the temple so late as the middle of the spring quarter: but it might very well have been sent on that expedition towards the end of March or beginning of April, and yet have encountered one of these winds on the way. We have already shewn that to get from Memphis to Syene, on the border of the great desert of Ethiopia, would require 60 days' march: and according to

f De Medicina Ægyptiorum, i. vii: xviii: Res Ægyptiacæ, i. i, 1–7.

Herodotus[g] the means of subsistence had already failed before Cambyses had accomplished one fifth of the distance which he must have had to march to arrive at his destination[h]. It is evident therefore that the entire duration of the expedition cannot be estimated at less than four months; and is more probably to be estimated at five. The most likely time for its commencement would be the month of February; and if it began in that, though it occupied four or five months in all, it might still be over, and Cambyses might have got back to Memphis, by the end of June or the beginning of July. The context of Herodotus shews that it could neither have been *after* the appearance of the Apis that Cambyses came again to Memphis, nor yet long before it: and in all probability the two events, his return with the wreck of his army, and the stated time of the *natales Apidis*, coincided as nearly as possible one with the other.

### SECTION IV.—*Corollary deducible from the above conclusion, respecting the date of the end of the reign of Cambyses.*

The conclusion, at which we have thus arrived, independently of its connection with the present question, which is the illustration of the Apis cycle of B. C. 523, is important to the determination of the true year of the death of Cambyses, and of the consequent close of his reign; about which there is great difference of opinion among chronologers. The canon of Ptolemy dates the close of this reign B. C. 522. The conclusion at which we have arrived fixes it to B. C. 523.

It will be seen by and by that the violent act of Cambyses, in putting the Apis to death in the very first year of its proper cycle, compelled the Egyptians to find a new Apis, and to begin a new reckoning of the Apis cycle in the second year of the old: and proofs will shortly be produced that this was actually done. Now Cambyses continued in Egypt, and even at Memphis, according to Herodotus[i], after this violence, until just before the time when he became aware of the conspiracy of the two Magi in Persia: and that discovery, according to Herodotus also[k], must have preceded

[g] iii. 25. [h] Cf. also ii. 29. [i] iii. 37. 61. [k] iii. 62. 65, 66.

his death a very short time; not many days, if Herodotus is to be believed. According to the canon of Ptolemy then, he must still have been in Egypt seven or eight months before the end of B. C. 522. He must have been in Egypt therefore in Athyr, Nab. 226, March 2 to April 1 B. C. 522, and very probably even in Phamenoth, June 30—July 30—in the second year of the Apis cycle; in which year, and between which dates in those years, it is certain from the proofs on record that the Egyptians must have consecrated and installed a new Apis, the representative of cycle xix; in the room of that which Cambyses had so lately put to death.

Now this is utterly improbable. It is morally certain that the Egyptians would not have ventured to do any thing of this kind while Cambyses was actually among them: and yet it is absolutely certain that they had both a proper succession of Apis cycles, from the new epoch of Nab. 226 B. C. 522, and a proper succession of representatives of each. We conclude then that, in dating the close of the reign of Cambyses in B. C. 522, the canon of Ptolemy is mistaken, or has never yet been properly understood. The true date of the death of Cambyses, thus deducible from the facts which we have just been considering, is confirmed by testimony superior even to the canon of Ptolemy; the testimony of the prophets Haggai and Zechariah, contemporaries of Darius Hystaspis; each of whom fixes the beginning of the reign of Darius to B. C. 522, and therefore by necessary consequence the close of that of Cambyses to some time in the latter half of B. C. 523*.

* It is clearly implied in Herodotus[l], that Cambyses was still in Egypt at the time of the conspiracy of the Magi: and yet the herald dispatched by them is said to have met him at Ecbatana[m] in Syria. And here too it must be supposed that he experienced the accidental wound, (as he was mounting on horseback to continue his journey,) of which, according to Herodotus[n], he died in 20 days' time: though Ctesias[o] supposes him to die of it on the 11th day after, and at Babylon in Egypt, not at Ecbatana in Syria; and in the 18th year of his reign[p].

Stephanus observes of Ecbatana or Agbatana[q]: *Πολίχνιον Συρίας . . οἱ δὲ νῦν Βατάνειαν αὐτὴν καλοῦσιν . . . Δημήτριος δέ φησιν Ἀγβάτανα διττὰ, τὰ μὲν τῆς Μηδίας τὰ δὲ τῆς Συρίας . . . ἣν καὶ Ἐπιφάνειάν φασι κεκλῆσθαι*: cf. in

l iii. 61. 37.
m 62: cf. 64.
n 65, 66.
o Photius, Cod. 72: p. 38, l. 9.
p Cf. 37—38.
q De Urbibus, 18.

## CHAPTER V.

### *On the second Type of the Apis cycle.*

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SECTION I.—*Change of the epoch of the Apis cycle.*

THE violent death of the Apis, on the occasion which we have been considering, as related historically by Herodotus [x], is attested by Justin [y], by Plutarch [z], by Lucian [a], by Ælian [b], and by others [c]: though Herodotus' single testimony is sufficient to establish the fact, and probably is the ultimate authority for every other to it, which is also on record.

This premature extinction of the type of the cycle, by reducing the priests to the necessity of finding another so much before the proper time, compelled them also to adopt a fresh epoch of the cycle; and under the circumstances of the case, this could not possibly be assumed earlier than the next year, Nab. 226. There would be the less reluctance to do this, because the death of Cambyses himself, two or three months after this outrage on the Apis, in a manner which looked so much like a retribution in kind, would be considered to have vindicated the honour of the Apis, and that of Osiris through his; and to have asserted

'Επιφάνεια [r]. Josephus mentions Ecbatana in Trachonitis of Judæa [s]. He supposes Cambyses to die at Damascus [t]: Zonaras says that he died at Damascus, but met with his wound at Ecbatana [u].

We may safely conclude then, that Cambyses must have been actually on his way back to Persia when he heard of the conspiracy of the Magi, though that must have begun while he was in Egypt; and that he had got as far as Ecbatana when the herald met him. If this place was any where near Damascus, it would be three weeks' march at least from Egypt: so that if Cambyses really died in September, B. C. 523, (as we apprehend to have been the case,) he must have left Egypt soon after the appearance of the Apis at the middle of July.

r p. 348.
s Vita. 11, p. 16.
t Ant. Jud. xi. ii. 2.
u iv. i. 169. D: 170. D.
x iii. 27: 29.
y i. 9. § 2.
z De Iside et Osiride, xliv.
a Contemplantes, 13. 66: Opp. i. 509.
b De Natura Anim. x. 28; Variæ Historiæ, vi. 8.
c Maximus Tyrius, Diss. xxxv. § 1. p. 409.

the divinity of Osiris anew, and his sovereignty over even the greatest of earthly potentates, even the king of Persia himself: in which light the priests of Egypt would take care to represent the event to the people.

The new epoch however could not be earlier than Nabonassar 225–226; nor fixed to an earlier solar term than Epagomene 5, Nab. 225, the stated lunar date of the second lunar year in the Apis cycle, according to type i; the Julian date of which, as our tables shew, was December 30 at 18 hours, December 31 at midnight, B. C. 523. The relation of this new lunar epoch to the moon would be just the same as that of the old. There was a solar eclipse Jan. 25, 1h. 30m. A. M. at Paris, B. C. 522. Consequently a mean new moon previously, Dec. 26, 12 h. 46 m. from midnight; the luna quinta of which might be dated December 30 at 18 hours, December 31 at midnight; that is, Epagomene 5, Nabon. 225. We begin therefore with submitting to our readers this second type of the cycle in its integrity, as follows *:

* The only doubtful point, *a priori*, with respect to this second type would be whether the *second* year of this, corresponding to the *third* of the first, would be the *first* intercalary year in this new type; or the *third* year in this, answering to the *fourth* in the other. The proper rule of the cycle made every third year intercalary down to the 21st. To retain that rule in this second type would be virtually to make the *fourth* year the first intercalary year instead of the *third*.

The Egyptians were no doubt aware of this anomaly. Yet we question whether, under any circumstances, they would have ventured to disturb any of the old and long established rules which had governed the administration of the Apis cycle and Apis calendar, up to the date of this interruption. The point however is decided by the epoch of the next type; which we shall see took its rise in the 18th year of this second one, when the epoch was Phamenoth 3; but if the 17th year of this type had been intercalary, (like the 18th in the old,) the epoch of the 18th must have been Phamenoth 4.

As to the change which the adoption of a new epoch of the cycle might also be expected to entail on the cardinal dates of the cycle, such as those of the conception, the birth, and the *natales Apidis*; we shall have an opportunity perhaps of considering that hereafter.

SECTION II.—*Apis Cycle, Type ii. Epoch, Epagomene* 5, *Nabon.* 225, *December* 30 *at* 18 *h.*—*December* 31 *at* 18 *h. B. C.* 523.

*Apis Cycle, Type* ii.

| Solar cycle. | Lunar cycle. | | |
|---|---|---|---|
| i | i | Epagomene | 5 |
| i | ii | Mesore .. | 24 |
| ii | *iii | Mesore .. | 13 |
| iii | iv | Mesore .. | 3 |
| iv | v | Epiphi .. | 22 |
| v | *vi | Epiphi .. | 11 |
| vi | vii | Epiphi.... | 1 |
| vii | viii | Paüni .... | 20 |
| viii | *ix | Paüni .... | 9 |
| ix | x | Pachon .. | 29 |
| x | xi | Pachon .. | 18 |
| xi | *xii | Pachon .. | 7 |
| xii | xiii | Pharmuthi | 27 |
| xiii | xiv | Pharmuthi | 16 |
| xiv | *xv | Pharmuthi.. | 5 |
| xv | xvi | Phamenoth | 25 |
| xvi | xvii | Phamenoth | 14 |
| xvii | *xviii | Phamenoth | 3 |
| xviii | xix | Mecheir .. | 23 |
| xix | xx | Mecheir .. | 12 |
| xx | *xxi | Mecheir .. | 1 |
| xxi | *xxii | Tybi .... | 21 |
| xxii | xxiii | Tybi .... | 11 |
| xxiii | xxiv | Chœac .... | 30 |
| xxiv | *xxv | Chœac .... | 19 |
| xxv | xxvi | Chœac .... | 9 |

*Last nine months of the cycle.*

| Month. | Days. | | |
|---|---|---|---|
| i | 30 | Chœac .... | 9 |
| ii | 29 | Tybi...... | 9 |
| iii | 30 | Mecheir .. | 8 |
| iv | 29 | Phamenoth | 8 |
| v | 30 | Pharmuthi.. | 7 |
| vi | 29 | Pachon.... | 7 |
| vii | 30 | Paüni .... | 6 |
| viii | 29 | Epiphi .... | 6 |
| ix | 30 | Mesore.... | 5 |
| i | 30 | Epagomene | 5 |

SECTION III.—*Verification of the second Type of the Apis cycle.* i. *Confirmation of the epoch,* Nab. 225–226.

It is related by Diodorus Siculus[d] that the Apis died in Egypt of old age, that is, by a natural death, the same year in which Ptolemy Lagi obtained possession of Egypt after the death of Alexander the Great: Μετὰ γὰρ τὴν Ἀλεξάνδρου τελευτὴν Πτολεμαίου τοῦ Λάγου παρειληφότος ἄρτι τὴν Αἴγυπτον, ἔτυχεν ἐν Μέμφει τελευτήσας ὁ Ἆπις γηραιός· ὁ δὲ τὴν ἐπιμέλειαν ἔχων αὐτοῦ τήν τε ἡτοιμασμένην χορηγίαν οὖσαν πάνυ πολλὴν εἰς ταφὴν ἅπασαν ἐδαπάνησε, καὶ παρὰ τοῦ Πτολεμαίου πεντήκοντα ἀργυρίου τάλαντα προσεδανείσατο.

Now, we hope to make it appear on a future occasion, that Alexander died June 13, B. C. 323: that the first partition

[d] i. 84.

of his dominions among the Diadochi was made within a month after: that Ptolemy consequently could not fail to be already in Egypt, which fell to his lot, before the first of Thoth the same year, Nabon. 426, Nov. 12, B. C. 323; five months later than the death of Alexander.

This year of Nabonassar stands at the distance of eight Apis cycles, 200 years of the equable æra complete, from Nabonassar 226, B. C. 523. It is manifest therefore that if reckoned from Thoth 1, Nabon. 226, or from Epagomene 5, Nab. 225, the eighth cycle would expire and the ninth would begin, in the regular course of things, Thoth 1 Nab. 426, or Epagomene 5 Nab. 225. But not so, if the first of these eight cycles were to be reckoned from Thoth 11 Nabon. 225, according to the old rule of the cycle. In that case, the eighth must have come to an end and the ninth have begun, Thoth 11 Nab. 425; almost a year before the death of Alexander, and still longer before the arrival of Ptolemy in Egypt, B. C. 323 Nab. 425 *exeunte*.

If then an Apis cycle was really coming to an end Nabon. 425 *exeunte* B. C. 323, this fact is, or ought to be, decisive that that cycle was reckoned not from the first year of the original cycle, but from the second: and equally so, whether the Apis was actually just dead of old age, as Diodorus represents it, or whether the priests, according to the rule of the cycle, (the proper period in the decursus of the cycle for so doing being now arrived,) had just put it to death.

### SECTION IV.—ii. *Lunar Epoch of the Macedo-Egyptian Metonic calendar*, B. C. 306.

Another and a still more decisive proof of the change in the epoch of the Apis cycle, from Thoth 11 Nab. 225 to Epagomene 5 the same year, is supplied by the following fact; to which we have already adverted more than once, but of which it is necessary now to give a somewhat more particular account than we have ever yet done.

It will be seen in due course of time, if we are permitted to complete our Origines Kalendariæ, that B. C. 306, after the action by sea off the island of Cyprus, in which the fleet of Antigonus, commanded by Demetrius his son, defeated that of Ptolemy Lagi, commanded by him in person; and

after the assumption of crowns by the Diadochi, which was the direct and almost immediate consequence of that battle; three forms of the Metonic calendar took their rise among the Greeks; i. that which we have called the Macedo-Hellenic, dated Dius 1 October 1; ii. that which we have named the Macedo-Syrian, dated Dius 1 October 30; and iii. that to which we have seen reason to give the denomination of Macedo-Egyptian, dated Dius 1 November 2.

Both the former at the time of their institution were sufficiently true to the moon; at least if referred to the luna secunda, or phasis. The third presented a singular contrast to each of them in that respect; in being dated three days later in terms of the same lunar reckoning: consequently on the *luna quarta* dated from the phasis, the *luna quinta* dated from the conjunction or change. The fact of this difference was established by extant dates in the style of each of these calendars, which it was easy to compare one with another; and we ourselves were aware of the fact before we had discovered the reason of it. Pliny the elder too had given us reason to believe that in Egypt, on some account or other, the lunar term of the *quarta luna* might be preferred to any other. Still it could not but appear a singular phenomenon that a lunar calendar, introduced into Egypt at Alexandria in particular, and under the auspices of Ptolemy Lagi, and intended for the use of his Grecian subjects more than for that of his Egyptian, should have borne date on the *luna quarta* or the *luna quinta;* especially as the calendar of his own native country Macedonia, to which he must have been accustomed all his life before, neither at this time nor at any former time exhibited any such phenomenon.

The mystery however was soon perceived to be cleared up and explained when we came to be better acquainted with the Egyptian cycle of Apis of the same period also. As soon as it was once understood that the lunar epoch of this Apis calendar long before the time of Ptolemy had been attached to this particular lunar term, and was so still as much as ever, nothing could appear more probable *a priori* than that a prudent and sensible prince like Ptolemy, the very first act of whose reign in Egypt had been expressly directed to conciliate the good-will of his Egyptian subjects, by convincing

them that he was disposed to sympathise with their national veneration for the Apis, if he was introducing or sanctioning the introduction of a new lunar calendar of any kind even for the use of his own Greek subjects, would purposely accommodate its reckoning to that of the Apis calendar.

Now this turns out to have been the case. The ninth cycle of the new type would bear date Epagomene 5 Nab. 425–426: and the 18th year of that cycle, as may be seen from the type itself, *supra*[e], would bear date Phamenoth 3 Nab. 442: and therefore the 7th lunation of that year, Mesore 30 Nab. 442 also. Now the 1st of Thoth Nab. 442, as our tables shew, coincided with Nov. 8 at midnight, B. C. 307: from which it follows that Mesore 1, the same year, fell on October 4 at midnight B. C. 306, and Mesore 30 on Nov. 2 at midnight.

It is clear then, beyond any reasonable possibility of doubt to the contrary, that, in fixing on November 2 to be the epoch of Dius 1 in the Macedo-Egyptian type of the Hellenic Metonic calendar, which was now coming into being in Egypt and for the use of the Greeks in Egypt; Ptolemy Lagi, or those who were conducting this reform of the calendar with his knowledge and his sanction of their proceedings, was deferring to the prejudices of his native Egyptian subjects; and sacrificing even the true reckoning of lunar time to their traditional reverence of the Apis, and to their long and inveterate attachment to the Apis calendar and the Apis rule. And we shall see by and by that this condescension on the part of Ptolemy was so grateful to the people, and so flattering and acceptable to the priests, that it induced them to do of their own accord, what nothing but the direst necessity ever compelled them to do against their will; viz. change the epoch and the type of the Apis cycle itself a second time; adopt both a new epoch and a new type, in order that the reckoning of lunar time in the Apis calendar, and in the Metonic calendar of Ptolemy just instituted, might begin and proceed alike.

### SECTION V.—iii. Cycle xx. 1. Nab. 251–252. B. C. 498–497.

We shall now proceed to consider the historical proofs or

[e] p. 566.

illustrations of this second type of the cycle, discoverable between Nabon. 225—226, the date of this second type, and Nab. 442—443, that of the third.

Now a statement occurs in Polyænus to the following effect[f]: *Δαρεῖος Αἰγυπτίων οὐ φερόντων Ὀρυάνδρου* (lege *Ἀρυάνδου*) *τοῦ σατράπου τὴν ὠμότητα, καὶ διὰ τοῦτο ἀποστάντων, αὐτὸς διὰ τῆς ἐρήμης Ἀραβίας ὁδεύσας ἧκεν εἰς Μέμφιν. ἔτυχον δὲ Αἰγύπτιοι τὸν Ἆπιν ἀφανῆ γεγονότα κατ' ἐκείνας τὰς ἡμέρας πενθοῦντες· Δαρεῖος προέγραψε τῷ ἀγαγόντι τὸν Ἆπιν δώσειν ρʹ τάλαντα χρυσίου. οἱ δὲ τὴν εὐσέβειαν αὐτοῦ θαυμάσαντες οὐκέτι μετὰ τῶν ἀποστάντων ἐτράποντο, ἀλλὰ σφᾶς αὐτοὺς Δαρείῳ παρέδωκαν.*

There cannot be much doubt that the name of the satrap which appears in this passage, Oryandres, is a corruption of Aryandes; who was actually left prefect of Egypt by Cambyses[g] in B.C. 523: and who was still governing that country at the time of Darius' Scythian expedition, and of his own expedition against Barca and Cyrene in Libya synchronous with it[h]: the date of both which is often assumed as B. C. 514; though, as we apprehend, it was in reality later. It appears further from Herodotus[g] that this satrap having taken upon him to coin silver money[i] in emulation and rivalry of the gold darics of Darius himself, and as fine in their way as these were in theirs; this act was resented by Darius as an affectation of sovereignty or of independence; that is, as an act of treason or rebellion: and he was put to death for it by him. It is just as probable however that his cruelty to his subjects, and the revolt of the Egyptians occasioned by it, might have something to do with this treatment of him at last.

If Polyænus may be depended on for a fact which reposes solely on his authority, the Apis to which he alludes must have been that which the Egyptians found and installed after the death of Cambyses, B. C. 523—522, as the representative of the 19th cycle, dated from the epoch of æra cyclica 3034 B. C. 973. No other cycle but that could possibly have come to an end in the regular course of things, during the

[f] vii. x. Darius, 7.
[g] Herodotus, iv. 166.
[h] Ibid. iv. 145. 165. 167.
[i] Cf. Hesychius, Ἀροανδικόν· νόμισμα ᾧ χρῶνται Αἰγύπτιοι ἀπὸ Ἀροάνδου: i. 544.

reign of Darius Hystaspis. If the Apis did not die before his time, the time during which he was missing, (*desideratus*,) in the regular course of things, between the end of one cycle and the beginning of another, we believe to have been comprehended between a certain time in Pachon, and a certain time in Athyr: which in this particular instance would come between August 23 B. C. 498 and March 25 B. C. 497. This period would coincide, it is true, with the third year of the Ionian revolt; but we do not know that there would be any difficulty in that. There is no reason *a priori* why proceedings might not be going on in one part of the empire under the prefects, satraps, or lieutenants of Darius, and in another under himself. His commanding the expedition against Egypt in person renders it even more probable that the rest of the forces of the empire, or the rest of its commanders, were employed at the time elsewhere. After all, this Egyptian revolt, according to Polyænus, does not appear to have proceeded further than a threat or a demonstration of that kind; all idea of serious resistance to the Persian government having been speedily obviated either by the prudence and policy or by the piety of Darius. It is very observable notwithstanding that the time prescribed for these proceedings by the law of the Apis cycle is precisely that when they would be most likely to be going on; viz. between August in one year, and March in the next.

SECTION VI.—iv. Cycle xxiv. Nabon. 350–351 B.C. 398–397.

It is mentioned by Diogenes Laertius in his account of Eudoxus[k], that when he was in Egypt, and admitted to a sight of the Apis, the Apis licked his outer garment: *θοιμάτιον περιελιχμήσατο*: from which act of the animal the priests are said to have prognosticated that Eudoxus would have an illustrious career, but a short one: and he died at 53 years of age[l].

Now Eudoxus did not visit Egypt until after the death of Socrates; the date of which was about the 6th of the Attic Skirrhophorion, the Julian June 16 B. C. 399. We shall probably have occasion to consider the date of this visit

k Lib. viii. cap. viii. § vi. 90.

l Cf. Diogenes Laertius, loc. cit. In particular his epigram on the death of Eudoxus, 91.

more particularly hereafter; and see reason to circumscribe it between the two limits of B. C. 398 and B. C. 397. This is a critical coincidence. The xxivth cycle from the original epoch, the vith from the new, would begin only Epagomene 5 Nab. 350, Nov. 30 B. C. 398; and the installation of the Apis, which represented that, some time in Phamenoth, would not be earlier than May 29 B. C. 397.

The old Apis indeed, the representative of the preceding cycle, might still be alive when Eudoxus arrived in Egypt, B. C. 399 or 398; but the fact which is related of the mode of his reception by the Apis, we see, would be possible even of the young one, the type of this xxivth cycle: and the act itself attributed to the animal, as every one must admit, looks more like the act of a calf than of a grown up and aged animal.

### Section VII.—v. Cycle xxvi. Nab. 400–401 B. C. 348–347.

It appears also from Arrian[o], that an Apis was living, and representing its proper cycle, at Memphis, when Alexander the Great first came there, and offered sacrifice to it there.

Alexander was in Egypt from the latter part of B. C. 332 to the summer or autumn of B. C. 331. This Apis was the successor of that which, as we shall see by and by, had been put to death by Artaxerxes Ochus, towards the close of its proper cycle. It represented the xxvith cycle, from the original epoch, the viiith from the new; bearing date Epagomene 5 Nab. 400 Nov. 17 B. C. 348: and at this time it was only 16 years old, and therefore might very well be then alive. It was the same in fact which died a natural death according to Diodorus, as we have seen, Nab. 425 B. C. 323, at the end of its proper cycle itself.

o De Expeditione Alexandri, iii. 1.

# CHAPTER VI.

## *On the third epoch and third Type of the Apis cycle.*

### SECTION I.—*Type of the third Apis cycle.*

WE begin with submitting to the reader the type of this third Apis cycle; as we have done that of each of the other two which preceded it.

*Apis cycle, Type iii, Nab.* 442–443. *Epoch, Mesore* 30 *Nab.* 442. *Nov.* 2 *B. C.* 306.

| Solar cycle. | Lunar cycle. | |
|---|---|---|
| i | i | Mesore.... 30 |
| i | ii | Mesore.... 19 |
| ii | *iii | Mesore.... 8 |
| iii | iv | Epiphi.... 28 |
| iv | v | Epiphi.... 17 |
| v | *vi | Epiphi.... 6 |
| vi | vii | Paüni .... 26 |
| vii | viii | Paüni .... 15 |
| viii | *ix | Paüni .... 4 |
| ix | x | Pachon.... 24 |
| x | xi | Pachon.... 13 |
| xi | *xii | Pachon.... 2 |
| xii | xiii | Pharmuthi 22 |
| xiii | xiv | Pharmuthi 11 |
| xiv | *xv | Phamenoth 30 |
| xv | xvi | Phamenoth 20 |
| xvi | xvii | Phamenoth 9 |
| xvii | *xviii | Mecheir .. 28 |
| xviii | xix | Mecheir .. 18 |
| xix | xx | Mecheir .. 7 |
| xx | *xxi | Tybi...... 26 |
| xxi | *xxii | Tybi...... 16 |
| xxii | xxiii | Tybi...... 6 |
| xxiii | xxiv | Chœac.... 25 |
| xxiv | *xxv | Chœac.... 14 |
| xxv | xxvi | Chœac.... 4 |

*Last nine months of the cycle.*

| Month. | Days. | |
|---|---|---|
| i | 30 | Chœac.... 4 |
| ii | 29 | Tybi...... 4 |
| iii | 30 | Mecheir .. 3 |
| iv | 29 | Phamenoth 3 |
| v | 30 | Pharmuthi 2 |
| vi | 29 | Pachon.... 2 |
| vii | 30 | Paüni .... 1 |
| viii | 29 | Epiphi.... 1 |
| ix | 30 | Epiphi.... 30 |
| i | 30 | Mesore.... 30 |

### SECTION II.—*Verification of the third epoch and third Type of the Apis cycle.*

#### *Objection from the violent death of the Apis in the reign of Artaxerxes Ochus.*

In order to prepare the way for the confirmation of this third epoch and third type by its proper historical proofs, it

is necessary to anticipate and to answer an objection; viz. That the regular succession of Apis cycles, from Nab. 225–226 B. C. 523–522, down to Nab. 425–426 B. C. 323–322, was a precarious assumption; because the same violent treatment of the Apis, which broke the regularity of the cycle in the time of Cambyses, occurred again in the reign of Artaxerxes Ochus: and therefore it might be supposed would be followed by the same effect on the cycle at that time as before.

That Artaxerxes Ochus after his reduction of Egypt, both out of resentment for the long and obstinate revolt of the Egyptians from the Persian government, and also in revenge for the affronts and insults which they had offered himself in person, did put to death the Apis in Memphis, and the goat in Mendes, and did commit other acts of violence to the religion and prejudices of the Egyptians, is certain[p]; and if Ælian is to be believed[q], to these outrages on the national superstition of Egypt he ultimately owed his own death: Bagoas an Egyptian, his favourite eunuch and his prime minister, notwithstanding his master's partiality for himself, having so deeply resented his treatment of the Apis and of the other sacred animals, that he not only murdered him at last, but cut up his flesh, and gave it to cats, and made handles for knives of his bones; just as he himself had sacrificed the Apis when in Egypt, as the type of Osiris, to the ass, as the type of Typhon[r], and had eaten of its flesh, along with his courtiers; for which reason, as well as for his cruelties in general, the Egyptians gave him the nickname of Μάχαιρα[s].

But there was this great difference between the circumstances of the violence done to the Apis by Cambyses, and those of the repetition of the same kind of treatment of it by this emperor; that the former happened at the very beginning of a cycle, the latter almost at the very end. The former could not fail to break the regularity of the cycle; the latter would not necessarily produce any such effect. The case of an Apis dying a longer or a shorter time before

p Plutarch, De Iside et Osiride, xi. xxxi. Ælian, Variæ Historiæ, iv. 8. Suidas, Ἆπις: ἄσατο: Ὦχος: κακοῖς ἐπισωρεύων κακά.

q Variæ Hist. vi. 8. De Anim. x. 28.

r Plutarch, De Iside et Osiride, xxxi. Ælian, Varr. iv. 8.

s Plutarch, De Iside et Osiride, xi.

the expiration of his proper cycle was liable to occur in the natural course of things; and no doubt did sometimes actually occur. No care nor contrivance of the ministers and attendants of the Apis could uniformly prolong its life for the whole of its 25 years: and yet its dying a natural death a few months before its time, or even a year before its time, would cause no interruption to the regular succession and regular reckoning of the cycle. It would make no difference to any thing but the period of mourning between the time of the disappearance of one Apis and that of the reappearance of another. It would be absurd to suppose that any such obvious contingency as this would take such consummate masters of their craft as the priests of Egypt by surprise; that they were not prepared for every thing of this kind; that they would not take very good care that even under such circumstances the Apis should never be forthcoming *before* his proper time, no more than that he should not always be produceable *at* the proper time.

Now the state of the case, with respect to the reduction of Egypt by Artaxerxes Ochus, appears to have been exactly *this*. It was effected either B. C. 350 *exeunte*, or B. C. 349 *ineunte*: in either case, in Nab. 399, the 25th year of the seventh cycle from the epoch of Epagomene 5 Nab. 225: which cycle began Epagomene 5 Nab. 375, Nov. 23 B.C. 373: and this 25th year thereof coincided with Nab. 399–400 B. C. 350–349; when the 1st of Thoth Nab. 399 was falling Nov. 19, B. C. 350, and Chœac 19, the stated date of this year of the cycle, was falling on March 6 B. C. 349, the luna 5[a], as appears from our general lunar tables in that year.

## SECTION III.—*On the date of the reduction of Egypt by Artaxerxes Ochus.*

It cannot indeed be denied that the chronology of this reduction of Egypt is involved in much obscurity. Eusebius[t] in one instance dates it Olymp. 107, B. C. 352; in another[u], six years before the end of the reign of Ochus; in a third[x], ad ann. Abrah. 1668 Olymp. 108, 1, B. C. 348. According to

t Chron. Arm. Lat. ii. 26.
u i. 325.
x ii. 223: cf. the Thesaurus Temporum: ad Ann. 1667 and 1668: Orosius, iii. vii. § 9.

Syncellus[y], the dynasties of Manetho ended 15 years before the reign of Alexander, (in Egypt,) and with this reduction of that country again under the Persian yoke: and that reign being dated B. C. 332, this gives the reduction, B. C. 347. Yet Manetho himself[z], like Eusebius, dated it in the 20th of Ochus: Syncellus himself[a] two years before the end of his reign. The beginning of the reign of Ochus cannot be dated earlier than B. C. 359, nor later than B. C. 358. If we accept Eusebius' date of the reduction, as the nearest to the truth among the above, in the 9th or 10th of his reign, that will make it B. C. 350 or 349, if not 348.

But the real chronology of this event is most certainly to be collected from Diodorus Siculus; who only has left a circumstantial account of it on record[b], beginning in the year of Thessalus[c], B. C. 351, and ending with the close of that of Apollodorus[c], B. C. 350 *exeunte*, or just at the beginning of that of Callimachus[d], B. C. 349.

It is here to be observed that Diodorus' rule for the reckoning of his consular, his Olympic, and his archontic years is to suppose them all to begin alike on or about the first of January; which was the proper beginning only of the Roman official or consular year. If there should be any doubt about the fact of this rule, we may have occasion to illustrate it by the necessary proofs at some future opportunity; but we could not digress to do so now. On this principle, the reduction of Egypt, the first thing related of the year of Thessalus, and the last of that of Apollodorus, must have come between Jan. 1 B. C. 351 and Jan. 1 B. C. 349.

It appears however that the Persian king had still his preparations to make even in the year of Thessalus[e]; so that, in strictness, this could be the date only of the resolution conceived by him, and begun to be acted upon, to take the command of the proposed expedition against Egypt in person, instead of leaving it to his generals and lieutenants, as the kings of Persia and as he himself had done before. It appears too[f] that, in the midst of his preparations, the principal cities of Phœnicia, Tyre, and Sidon, revolted also; and pre-

[y] Page 98. l. 4: 486. 17–19.
[z] Hermapion, xx. 41: xxi. 46: cf. Syncellus, 145. 6: 146. 4.
[a] 486. 14.
[b] xvi. 40–51. [c] 46. [d] 52.
[e] xvi. 40. [f] 41.

sently after the kings of Cyprus too[g]: on hearing of which the king of Persia immediately wrote to Idrieus satrap or king of Caria, *ἄρτι μὲν παρειληφότα τὴν ἀρχὴν*[g], to levy forces and make war on Cyprus.

This Idrieus was the brother of Mausolus and Artemisia. Mausolus and Artemisia, Idrieus and Ada, (Artemisia, the sister and wife of Mausolus, Ada the sister and wife of Idrieus,) reigned in Caria one after another[h]: and if Idrieus was just come to the throne there, he must have just succeeded to Artemisia. Mausolus, according to Diodorus[i], died Olymp. 106, 4, in the year of Eudemus, B. C. 353—352: Artemisia survived him only two years[i]; in which case she could not have been dead before B. C. 352, nor still living after B. C. 351*. We may take it for granted then

* Mausolus, according to Diodorus[k], reigned 24 years: and he died, as we have seen, B. C. 353, Eudemus[k]. Artemisia reigned two years[l]. Idrieus is said to have reigned seven[m]: and *his* death is dated Olymp. 109, 1, Lyciscus, B. C. 344[n]; which accords with the date of his accession, Thessalus, B. C. 351. Ada his wife and sister succeeded him[n], and held the government *four* years[o], down to Nicomachus, B. C. 341. She was then dispossessed by Pyxodorus, her younger brother: and he is said to have occupied the kingdom *five* years[o], Ἕως ἐπὶ τὴν Ἀλεξάνδρου διάβασιν ἐπὶ τὴν Ἀσίαν[p]: that is, till B. C. 335. These dates are consistent; or might easily be rendered so.

Artemisia, says Harpocratio[q], Θυγατὴρ μὲν ἦν Ἑκατόμνω, γυνὴ δὲ καὶ ἀδελφὴ Μαυσώλου, ἥν φησι Θεόπομπος φθινάδι νόσῳ ληφθεῖσαν διὰ τὴν λύπην τὴν ἐπὶ τοῦ ἀνδρὸς καὶ ἀδελφοῦ Μαυσώλου ἀποθανεῖν[r]. The celebrated Mausoleum at Halicarnassus, which the ancients reckoned one of the seven wonders of the world, and which has given its name to buildings of the same description in our language, was erected by her over her husband[s]. The dedication of this building, and the games with which it was celebrated, particularly the contest for the prize in eloquence and poetry, are well known facts[t]. Theopompus carried away the prize on this occa-

g xvi. 42. h 45. 69. 74.

i 36. 32: cf. 45: also Pliny, H. N. xxxvi. 6. p. 641. (cf. 4. §9. p. 625, 626.) who dates the death of Mausolus, Olymp. 106. 2. two years earlier; yet U. C. 404. There is a various reading of this Urban note, 402 for 404; which would answer to B. C. 352, and so agree with Diodorus' date. Mausolus was born at Mylasa in Caria, (Vitruvius, ii. cap. 8. p. 64.) and inscriptions have been discovered there which illustrate the chronology of his reign.

k xvi. 36.

l xvi. 36. 45.

m xvi. 45. 69. n 69. o 74. 69.

p Cf. Plutarch, Alexander, xxii: Arrian, De Expeditione, i. xxiii.

q Ἀρτεμισία.

r Cf. Scholia in Demosthenem, De Rhod. Libertate.

s Cicero, Tusculanæ, iii. 31. § 75: Pliny, H. N. xxxvi. 4. § 9. p. 625, 626.

t A. Gellius, x. 18: Plutarch, Decem oratores, Isocrates: Vita Sophoclis, i. 487. B. De Æschine: Suidas, Θεοδέκτης: Ἰσοκράτης.

that the revolt of Cyprus, earlier than the time by which Ochus was yet ready to march even for the recovery of Phœnicia, yet not earlier than the time when Idrieus suc-

sion against his own master Isocrates—of which he made no scruple to boast[u].

Plutarch mentions and quotes a letter of Agesilaus to Idrieus the Carian, which must have been this Idrieus, the successor of Artemisia: written by him in his lifetime[x]—consequently before B. C. 362 or 361—in one of which years he died. At that time Mausolus was certainly reigning in Caria[y]. The letter must have been written to Idrieus, as a private individual, though no doubt a person of consequence.

In Demosthenes, *Κατὰ Τιμοκράτους*[z], mention is made of an embassy to Mausolus, which the context fixes to the summer of B. C. 354 or 353: and then he was certainly living. In the oration *Περὶ Ῥοδίων ἐλευθερίας* (Thessalus, B. C. 351—350) the social war, (waged by the Chians, Rhodians, and Byzantines against the Athenians, B. C. 358—357[a],) is said to have been instigated by him[b]; and yet it appears he was dead, and Artemisia was reigning, at the time of that speech[c]. If so, she was still living after the ingress of the year of Thessalus, Hecatombæon 1 July 22 B. C. 351: which would be a critical coincidence, if Idrieus nevertheless was reigning in her stead in the latter half of that very year. When Isocrates' vth oration (*Φίλιππος*) was composed, Ochus was still living, and Idrieus was still reigning in Caria[d].

When Demosthenes' xivth oration, (*Περὶ Συμμοριῶν*,) was delivered, (Diotimus, 354—353) Egypt was still in a state of independence[e]: and in the oration *Περὶ Ῥοδίων ἐλευθερίας*, though dated B. C. 351—350, an expedition against Egypt is alluded to as having recently failed[f]; which must have been the last before this now undertaken by Ochus in person, yet in the course of his own reign too: and it is mentioned *obiter* in Diodorus also[g]. That the last expedition, (the chronology of which we have been considering,) should not be alluded to in this oration, is a very natural circumstance; the date of *this* being soon after midsummer B. C. 351. In Isocrates ad Philippum, § 117, 118, there is an allusion to an expedition of the reigning king of Persia against Egypt, which had recently failed: and that too must have been the last attempt of the kind before the expedition of B. C. 350—349. The date of this oration was B. C. 346 after the conclusion of the peace with Philip, § 62; but not before the conclusion of the Phocian war, § 60, 61. It must therefore have been later than the expe-

u Eusebius, Præparatio Evang. x. iii. § 5. 455.

x Vita, xiii.

y Diodorus, xv. 90. Molon.

z Oratio xxiv. 15: cf. the Procem.

a Diodorus, xvi. 6, 7–15. 22.

b Oratio, xv. § 3: cf. Scholia Ulpiani vulgaria, In Timocratem, Procem.

c § 12. 28, 29. 34: cf. Ulpian, Procem.

d § 115, 116. (cf. 160.) 120.

e § 9.

f xv. § 5: 9–11: 12, 13: cf. the Scholia of Ulpian.

g xvi. 40. 48.

ceeded to Artemisia, must have been an event only of the latter half of B. C. 351 at the earliest.

Now as Ochus set out at last from Babylon[h], with an army of 300,000 foot and of 30,000 horse[i], it is not to be supposed that he could march to Cœlesyria from that quarter, with so large a force, in less than four or five months' time. It took Cyrus the younger four months to march from Sardes to Cunaxa, in the plain of Babylon, with a much more expeditious army. Besides this, the movements of Ochus by land were to be accompanied and assisted by a fleet of 800 ships at sea[i]. We have then even after his arrival in Cœlesyria to take into account the operations there, including the reduction of the revolted cities[k], and the time which would be necessary for that purpose; before the march upon Egypt itself could be even ready to begin. And since it appears that after the reduction of Sidon[l] he was joined by a body of mercenaries levied in Greece, (from Argolis, Thessaly, and other parts,) this is an argument that the season was now advanced; and it must have been late in the year, before he actually continued his march to Egypt, which Diodorus dates in the year of Apollodorus B. C. 350.

The context of events[m], from the time of the arrival of the Persians at Pelusium on the frontiers[n], down to the submission of Memphis and the final reduction of the country[o], proves very clearly that the annual inundation could have been opposing no impediment to the prosecution of military operations, all the time; and therefore that it must have been either not yet begun or already over: and as the former supposition would be inconsistent with the course of circumstances subsequently, the latter only can be admissible. The reduction of Egypt therefore at last and the actual termination of the war might fall out exactly as Diodorus gives us reason to conclude it must have done; at the very end of the year of Apollodorus, B. C. 350, or at the very beginning

dition against Egypt under Ochus in person: and though that had succeeded, and it might have been known to Isocrates that it had succeeded, it did not suit the object which he had in view in this address to Philip to take any notice expressly of its success.

[h] Diodorus, xvi. 43. 42. [i] 40. [k] 43–45. [l] 46: cf. 44. [m] 46–51. [n] 46. [o] 51.

of that of Callimachus B. C. 349; each of them dated and reckoned according to his peculiar rule.

Diodorus has not entered into the particulars of the treatment of Egypt by Ochus, after its reduction. He mentions only his appointing a satrap over it, and then returning himself to Babylon; taking with him however the spoils of Egypt. Whether his returning to Babylon in particular is an argument of the approach of the autumnal season; or whether he returned thither merely because he had set out at first from thence; we cannot say: but according to the rule of the Persian kings Babylon was the quarter in which they ordinarily spent the autumn of the natural year. The death of the Apis in Egypt then, while Ochus was still there, could not happen earlier than B. C. 349; and if it happened in that year, it could not have done so much before the end. If the stay of Ochus in Egypt was protracted into B. C. 348, the death of the Apis might be an event of that year too. In any case its death, even if hastened by the violence of the Persian king, would come so near to the end of the current cycle, that, as we have already observed, it was not likely to make any difference to the regular decursus of the cycle; it could affect nothing but the ordinary length of the national *justitium*, the public mourning and dejection for the disappearance of the Apis. And if that was protracted, under such circumstances, longer than usual, it would be only the more in unison with the situation of the country itself; and only the more natural an expression of the general melancholy, the universal grief and distress of the nation, under the consciousness of the treatment which their gods and their antiquities, every thing which they esteemed precious, and sacred, and venerable, had experienced at the hands of their ruthless conqueror: of whom Diodorus relates[p] that he carried away the sacred records, kept in the temples, (τὰς ἐκ τῶν ἀρχαίων ἱερῶν ἀναγραφάς,) the historical monuments of the country; which the priests procured again only by means of the payment of a large sum of money to Bagoas.

We cannot help suspecting however that the actual length of the stay of Artaxerxes in Egypt, after its reduction, was greater than it would appear to have been from Diodorus'

p xvi. 51.

account of the termination of these proceedings: and that one motive with him to a residence of longer continuance on the spot was his very hatred of the Egyptians itself. For there is reason to believe that he carried his antipathy to them and to their religion much further than Diodorus alone would imply; that during his stay every conceivable indignity was done to the national superstitions and to the national predilections; that the Persians, under his direction, carried into execution a scheme for suppressing or perverting the most characteristic features of the national religion or a large scale; transferring in particular the honours before paid to Osiris to the antagonist principle or person, Typhon, the most opposed to him, in the estimation of the Egyptians, of any thing in nature besides, and in the opinion of the Persians themselves the coordinate of their own Ahriman, or Arimanius; effacing the names and legends of Osiris on the monuments and sculptures, and substituting those of Typhon in their stead. Traces of such a substitution, notwithstanding the pains taken by the Egyptians to obliterate them, and to restore every thing to its former state, as soon as they acquired the power of doing so under the Ptolemies, are still discoverable[q], and have not a little perplexed the learned in Egyptian mythology and antiquity; as if there had once been a time when Typhon, the most hateful of all conceptions to an Egyptian apprehension, and the most dreadful too, must have been regarded in a very different light, and must have been treated with the very same honours and marks of respect as Osiris himself. This supposition has been entertained; but it is confuted by its own absurdity, and even by its absolute impossibility. Its foundation however, if it has any thing to rest upon, is in all probability the fact to which we have just adverted. To do all this on the part of the Persians, and to do it effectually, would require a longer stay in Egypt than Diodorus appears to suppose Ochus must have made.

### SECTION IV.—i. *The Rosetta stone.*

To proceed however to the historical illustrations and proofs of this third type of the Apis cycle, of the epoch of

[q] See Wilkinson, second series, i. xiii. 416: 418, 427: Bunsen, i. 417.

Mesore 30, Nab. 442, Nov. 2, B. C. 306: the first which we shall produce is supplied by the Rosetta stone, and by the inscription upon it.

Of this celebrated inscription, there is a facsimile in the Hermapion of Mr. Ideler the younger[r], and in the Recueil des Inscriptions de l'Egypte, of Mons. Le Tronne[s]: and the English reader may find a version of it in Hamilton's Ægyptiaca[t], and one of so much of the original, as is extant in the hieroglyphical character, in Mr. Birch's Egyptian Antiquities[u]. We shall consider the date which occurs upon it by and by: at present we wish to direct attention to the following passage in it.

Among other acts of munificence or of piety, which it attributes to the reigning king (the 5th Ptolemy, surnamed Epiphanes) since his accession, one is his contributions, donations or largesses, in behalf of the Apis and of the Mneuis, and of the other sacred animals. According to the text of Mons. Le Tronne the words of the Greek are these[x]: Τῷ τε Ἄπει καὶ τῷ Μνεύει πολλὰ ἐδωρήσατο, καὶ τοῖς ἄλλοις ἱεροῖς ζώοις τοῖς ἐν Αἰγύπτῳ, πολὺ κρεῖσσον τῶν πρὸ αὐτοῦ βασιλέων φροντίζων ὑπὲρ τῶν ἀνηκόν(των εἰς) αὐτὰ διαπαντὸς, τά τ' εἰς τὰς ταφὰς αὐτῶν καθήκοντα διδοὺς δαψιλῶς καὶ ἐνδόξως . . . καὶ τὸ Ἀπιεῖον ἔργοις πολυτελέσι κατεσκεύασεν.

That the young Ptolemy then had made costly presents of some kind or other to the two sacred bulls Apis and Mneuis, since he came to the throne; in particular that he had repaired or embellished the Apiëum, or temple of the Apis, is clearly attested in this statement. That he had contributed to the funeral charges of others of the sacred animals, since his accession also, which in Egypt was a very considerable item of the expenses incumbent on the priests, is also implied by it. Therefore that some of these animals must have died and been buried since he came to the throne follows of necessity. But that the Apis or the Mneuis was of this number does not appear. It is not said that he had contributed to *their* funeral expenses; though those, as often as there was occasion for them, were probably the greatest of all; merely

r Appendix, pag. 12. No. ii.
s i. pag. 240. xxv. (Paris, 1842.)
t London, 1809, page 434.
u Part ii. pag. 114–117.
x xxv. 248. v. 31, 32, 33.

that he had taken better care of both than any of his predecessors; and in particular that he had renewed or beautified the abode of the Apis.

Now this distinction is critical. This Ptolemy came to the throne Mecheir 17, March 28, B. C. 204. The inscription is dated on Mecheir 18, in the 9th of his reign[y]: and it mentions the 17 Mecheir (the date of the accession) also[z]; one of them March 26, the other March 27, B. C. 196. It is self-evident that between Mecheir 17, March 28 B. C. 204, and Mecheir 18, March 27 B. C. 196, many of the sacred animals might have died. But as to the Apis in particular: the vth cycle from the epoch of Mesore 30, Nab. 442, Nov. 2, B. C. 306, would begin Mesore 30, Nab. 542, Oct. 8, B. C. 206. The Apis which represented the preceding cycle therefore must have been dead and buried before Epiphanes came to the throne. The Apis which succeeded it would be installed in Mecheir or Phamenoth, Nab. 543, sometime in April, B. C. 205: i. e. ten or eleven months before his accession, Mecheir 17, March 28 B. C. 204; so that though he could not have had an opportunity of contributing to the embalment and burial of an Apis, since he came to the throne, one of the first acts of his reign might be to repair or embellish the Apiëum; which the ceremony of the installation itself, so recently celebrated, might be the occasion of suggesting to him to do*.

* The reign of Ptolemy Philopator, the father and predecessor of Ptolemy Epiphanes, in the canon of kings is circumscribed by Thoth 1 Nab. 527 October 18 B. C. 222, and Thoth 1 Nab. 544 Oct. 13 B. C. 205. It is the general rule of the canon that the initial date of each reign assigned therein anticipates on the true. On this principle the true date of the beginning of the reign of Ptolemy Epiphanes might have been *later*, but could not have been earlier than Thoth 1 Nab. 544 October 13 B. C. 205.

This rule of the canon certainly holds good in the case of this reign in particular. It appears from the Rosetta stone that the true day of the accession of Ptolemy Epiphanes, and consequently of the death of Philopator his father, was Mecheir 17: and the 18th Mecheir being specified in the inscription as a day in the ninth year of his reign, and Mecheir the 18th in this year being determinable to March 27 B. C. 196; it follows that the years of his reign in the inscription must have been dated from Mecheir 17, or from some day not later than Mecheir 17: and the ninth of them bearing date Mecheir 17 B. C. 196, the first must have borne date

[y] P. 244. l. 4: 6–245. 8, 9: 249. 36. [z] P. 250. l. 46.

Besides this allusion, there is a lunar date on the stone, in terms both of the Egyptian calendar, Mecheir 18, and of the

Mecheir 17 B. C. 204, which coincided with March 28 in that year. It would be entirely consistent with the fact of such an actual date as this, to assume the same date, according to a positive rule, Thoth 1 Nab. 544 October 13 B. C. 205.

The reign of Ptolemy Philopator then having certainly lasted down to Mecheir 17 Nab. 544 March 28 B. C. 204; the fifth Apis cycle of the third type, which as we have seen entered Mesore 30 Nab. 542 October 8 B. C. 206, must undoubtedly have fallen within the limits of his reign. He must have survived the beginning of that cycle, Mesore 30 Nabon. 542; and the birth of the Apis (whatsoever was its stated date in this type of the cycle; which we believe was Phaophi 24, in this instance Dec. 6 B. C. 206); and the installation of the Apis, whatsoever was the stated date of that ceremony too in this third type; which we believe to have been Mecheir 29—consequently in the present instance Mecheir 29 Nab. 543 April 9 B. C. 205. It is evident also that this fifth cycle, of the date of Mesore 30 Nab. 542, was the only Apis cycle of type iii which could possibly fall within the limits of the reign of this Polemy. The cycle last before that would fall out Mesore 30 Nab. 517 October 14 B. C. 531, in the reign of his predecessor Ptolemy Euergetes I, and according to the canon of Ptolemy nine years before the end of his reign.

Now we have learnt from three of our authorities, Pliny, Solinus, and Ammianus, that the proper abode of the Apis from the time of its installation at Memphis, was mystically termed *θάλαμος*. We have learnt too from Diodorus that the ship which was employed to transport it from Nilopolis to Memphis, preparatory to the ceremony of the installation there, was also called *κατ' ἐξοχὴν ναῦς θαλαμηγὸς*, a ship which carried such a *θάλαμος*. It is manifest too that this ship, if used exclusively for that purpose and on such occasions, would be used solely on the Nile, and would be wanted solely to navigate the Nile. It would have no other duty except that of plying backwards and forwards, on such occasions as these, from Memphis to Nilopolis, and from Nilopolis to Memphis.

Now it appears from Athenæus, v. 38, 39, (or rather from Callixenus, who is there quoted in terms by Athenæus,) that one of the two ships of extraordinary size and capacity, which this Ptolemy Philopator built sometime in his reign, was intended exclusively for the navigation of the Nile; and was constructed accordingly, and in a very different manner from what it must have been, had it been intended for the same use as ships in general, viz. to navigate the sea. It appears too that this ship was called *ναῦς θαλαμηγός*. The words of Callixenus are: Κατεσκεύασε δ' ὁ Φιλοπάτωρ *καὶ ποτάμιον πλοῖον τὴν θαλαμηγὸν καλουμένην*: and yet of so extraordinary a size that it was half a stadium (that is, 88 yards, 264 feet,) in length, and 30 cubits, (52 feet at least,) in breadth. From the name thus given to this ship, and from the locality to which it was confined, combined with the critical coincidence of the falling out of one Apis cycle, but only one,

Macedo-Egyptian, Xanthicus 4, each in the 9th year of this king. The learned have long been aware that Mecheir 18 in this year must have corresponded to March 27, B.C. 196: and therefore have also been aware that Xanthicus 4 must have done the same. It has been long known too from actual calculation that March 24, Xanthicus 1, B.C. 196, was neither the *luna prima* nor the *luna secunda;* but instead of either was the luna *quarta* or *quinta;* yet why Xanthicus 1, in a notoriously lunar calendar, should be found agreeing with the *luna* 4^a or 5^a, and not the *luna* 1^a or 2^a, no one hitherto has been able to explain. This date is consequently just as important to the Macedo-Egyptian calendar as to the Apis. At present however we shall consider it solely in connection with the latter.

Apis cycle, Type iii. Cycle v. 10. Nab. 551–552, B.C. 197–196.
Epoch, Pachon 24.

| Months. | Days. | Nab. 551–552 | | |
|---|---|---|---|---|
| i | 30 | Pachon ..24 | | |
| ii | 29 | Paüni ....24 | | |
| iii | 30 | Epiphi....23 | | |
| iv | 29 | Mesore ...23 | | |
| v | 30 | Thoth ....17 | October ....27 | B.C. 197 |
| vi | 29 | Phaophi ..17 | November ..26 | |
| vii | 30 | Athyr ....16 | December ..25 | |
| viii | 29 | Chœac....16 | January ....24 | B.C. 196 |
| ix | 30 | Tybi......15 | February....22 | |
| x | 29 | Mecheir ..15 | March ......24 | |
| | | 18 Mecheir | March 27 | |

## SECTION V.—ii. Cycle xii. 1. Nab. 717–718.

It is upon record[m] that, when Augustus was in Egypt after the battle of Actium, he refused to see the Apis, or to offer it any mark of respect. An Apis then was living, and repre-

in the reign of Ptolemy Philopator, we cannot but draw the inference that this ship was purposely built by him against the arrival of that cycle, and against the ceremony of the natales or installation which would have to be performed six months after its arrival. This conclusion is important in fixing the last year of the reign of this Ptolemy; in a manner too consistent with the testimony of the canon of kings and with that of the Rosetta stone also. The date of the installation in this fifth cycle of type iii,

[m] Zonaras, x. xxxi. 531. A. Cf. Dio, li. 16. Suetonius, Augustus, xciii. 3.

senting its proper cycle, when Augustus (at that time called only Cæsar Octavianus) was in Egypt: which we hope to shew elsewhere was before and after August 1 B. C. 30 U. C. 724. And this Apis is mentioned by Dio too [d] in his account of the omens which preceded the reduction of Egypt and the deaths of Antony and Cleopatra this very year.

Yet this also is a critical coincidence. The xiith Apis cycle from the epoch of Mesore 30 Nab. 442 began only Mesore 30 Nab. 717, August 25 B. C. 31; that is, only the year before; and much about the same time in that as when Augustus was in Egypt in this. Had he been there at this time in B. C. 31, he would have found either no Apis at all, or none as yet installed. The installation of this on Mecheir 29, Nab. 718, would be an event of February (Feb. 25) B. C. 30: consequently some months before Augustus' arrival in Egypt, but still a recent event.

### Section VI.—iii. Cycle xiii. 2. Nab. 743–744. B. C. 5–4. Epoch, Mesore 19 Nab. 743.

*Date of the Nativity, recorded from the Egyptian calendar by Clemens Alexandrinus* [e].

| Month. | Days. | Nab. 743–744 | | | | |
|---|---|---|---|---|---|---|
| i | 30 | Mesore | 19 | | | |
| ii | 29 | Thoth | 14 | September | 6 | B. C. 5. |
| iii | 30 | Phaophi | 13 | October | 5 | |
| iv | 29 | Athyr | 13 | November | 4 | |
| v | 30 | Chœac | 12 | December | 3 | |
| vi | 29 | Tybi | 12 | January | 2 | B. C. 4. |
| vii | 30 | Mecheir | 11 | ——— | 31 | |
| viii | 29 | Phamenoth | 11 | March | 2 | |
| ix | 30 | Pharmuthi | 10 | ——— | 31 | |
| | | 19 Pharmuthi. | | April 9. Luna 10[a]. | | |

as we shall see hereafter, would be Mecheir 29 Nab. 543, April 9 B. C. 205. At this time and on this day, Ptolemy Philopator must have been still alive, if he died only Mecheir 17 Nab. 544—that is, March 28 B. C. 204.

It appears indeed from the description of this ναῦς θαλαμηγὸς in Athenæus, that it was intended in some manner or other to do honour to Aphrodite and Dionysos: which however in our opinion is no proof that it might not also be intended for this ceremony in honour of the Apis; but rather the contrary. For the Grecian Aphrodite and Dionysos, in such

[d] li. 17. [e] See our Prolegomena, cap. iii. 125–142.

For the further explanation of this date we refer to our Prolegomena. Its importance consists i. in its antiquity, which goes back to the end of the first century: ii. in its attesting so clearly that the traditionary date of the Nativity at this early period was the tenth of the lunar month, and consequently in the Jewish calendar the 10th of Nisan: iii. in its attesting the true year also of the Nativity, B. C. 4.

In our Prolegomena we explained this date, and the rest which are there considered, by reducing them to the Macedo-Egyptian calendar for the time being: and the same coincidences held good in that. We have now however no doubt that they were taken from the Apis calendar; and that they are first and properly to be explained by means of that: and the mere fact of Clemens Alexandrinus' recording them in terms of the equable calendar of the Egyptians, and not in the style of any of the lunar calendars of the time distinct from that, not even of the Macedonian itself, in our opinion is almost a demonstrative proof that they were taken directly from the Apis calendar: the proper lunar style of which was the same as the proper solar; and therefore that they are first and properly to be reduced to that.

### SECTION VII.—iv. Cycle xiv. 1. Mesore 30 Nab. 767. Aug. 12 A. D. 20.

It was mentioned by Pliny, and repeated by Solinus and by Ammianus [f], that the Apis refused the food which Germanicus Cæsar offered it; and that this was considered a prognostication of his approaching death. An Apis then must have been living when Germanicus visited Egypt.

It may be collected from Tacitus [g], that he was there in the summer of U. C. 772, Silanus and Norbanus, A. D. 19; after corn harvest that year [h]: there being a scarcity at the time, to which Josephus seems also to allude [i]. He had cer-

a case, could be meant only of the Egyptian Isis, or at least the Egyptian Athor, and Osiris: to each of whom the Apis in particular stood almost in the same relation; and, as representing a lunæsolar cycle, might be said to represent both of them, the one as the sun and the other as the moon, at once.

f Supra, p. 475. v.

g Ann. ii. 59–61: 62–69. cf. 53.

h Ibid. 59. 62.

i Contra Apion. ii. 5.

tainly got back to Antioch in Syria[k], before October 9 at least, the date of his death this year[l].

The xivth cycle from the epoch of Mesore 30, Nab. 442, would enter Mesore 30 Nabon. 767 Aug. 12 A. D. 20: that is, a year after this very visit. An Apis might therefore be living in the 25th year of the cycle; but it would then be very old; and it might well have lost its appetite for food: which every one must consider a much more natural explanation of the act attributed to it, in refusing food from the hand of Germanicus, than any presentiment which it could possibly possess of the approaching end of its illustrious visitor.

## Section VIII.—v. *Inscription of the Marmor Tripolitanum.*

Cycle xiv. 8. Epoch, Paüni 15. Nabon. 774.

| Month. | Days. | Nab. 774–775 | | | | |
|---|---|---|---|---|---|---|
| i | 30 | Paüni | 15 | | | |
| ii | 29 | Epiphi | 15 | | | |
| iii | 30 | Mesore | 14 | | | |
| iv | 29 | Thoth | 9 | August | 25 | A. D. 27. |
| v | 30 | Phaophi | 8 | September | 23 | |
| | 25 | Phaophi | | October | 10 | |
| | 15 | Luna of Phaophi | | October | 7 | |
| | 22 | .. | .. .. | ——— | 14 | |

For the general explanation of the chronology of this date also we refer to our Prolegomena[m]. When treating of this inscription and of this date in that work, we reduced the latter to the Macedo-Egyptian lunar calendar; and according to that we found the limits of the Jewish Scenopegia at this time to be October 8–15 both inclusive; one day later than October 7–14. The Egyptian date of Phaophi 25 is the same in each of these cases; and it falls in each on the Julian October 10: the only difference is that October 10, in the former case, would be the third day of the Scenopegia at Berenice, in the latter it would be the fourth; but it would be the feria prima or Sunday in each case alike. We cannot undertake to decide which of these reductions of Phaophi 25 A. D. 27 is the more likely to be the true; but we still incline to the opinion that it is the former.

k Ann. ii. 69–72.

l Kalendaria, apud Foggini, p. 114. Kalendarium Antiatinum.

m Cap. iii. 152–167.

## SECTION IX.—vi. *Date of the Passion recorded by Clemens Alexandrinus* [n].

Cycle xiv. 10. Epoch, Pachon 24. Nab. 776.

| Month. | Days. | Nab. 776–777 | | | | |
|---|---|---|---|---|---|---|
| i | 30 | Pachon | 24 | | | |
| ii | 29 | Paüni | 24 | | | |
| iii | 30 | Epiphi | 23 | | | |
| iv | 29 | Mesore | 23 | | | |
| v | 30 | Thoth | 17 | September | 1 | A. D. 29. |
| vi | 29 | Phaophi | 17 | October | 1 | |
| vii | 30 | Athyr | 16 | ——— | 30 | |
| viii | 29 | Chœac | 16 | November | 29 | |
| ix | 30 | Tybi | 15 | December | 28 | |
| x | 29 | Mecheir | 15 | January | 27 | A. D. 30. |
| xi | 30 | Phamenoth | 14 | February | 25 | |
| xii | 29 | Pharmuthi | 14 | March | 27 | |

14th Luna of Pharmuthi 27 Pharmuthi April 9.

The importance of this date too, as before [o], consists i. in its antiquity; ii. in its assigning the true year of the Passion: iii. in its attesting the ancient and authentic tradition of the church that the solar date of the Nativity [o] was the solar date of the Passion also: in other words, that our Saviour both was born and suffered on the same day.

## SECTION X.—vii. *Date of the Scenopegia, attested by Philo Judæus*, A. D. 38.

Cycle xiv. 19. Epoch, Mecheir 18. Nab. 785.

| Months. | Days. | Nab. 785–786 | | |
|---|---|---|---|---|
| i | 30 | Mecheir . . 18 | | |
| ii | 29 | Phamenoth 18 | | |
| iii | 30 | Pharmuthi 17 | | |
| iv | 29 | Pachon. . . . 17 | | |
| v | 30 | Paüni . . . . 16 | | |
| vi | 29 | Epiphi . . . . 16 | | |
| vii | 30 | Mesore. . . . 15 | | |
| viii | 29 | Thoth . . . . 10 | August . . 23 | A. D. 38. |
| ix | 30 | Phaophi . . 9 | September 21 | |
| | | Luna 15ª of Phaophi | October . . 5 | |
| | | —— 22ª ——— | ——— 12. | |

[n] Prolegomena, cap. iii. 143. [o] See section vi, supra p. 586.

In our Prolegomena[p] we explained these dates of the Scenopegia at Alexandria, at the time of the apprehension of Flaccus Aquilius in this year, A. D. 38, by reducing them to the Macedo-Egyptian calendar, which differed at this time by two days from the Apis calendar. We give them however at present as if they were to be explained by the Apis calendar; though the former reduction may still be, and probably is, the true one. It makes no difference to the argument in our Prolegomena, which of these hypotheses is adopted.

SECTION XI.—viii. *Date of the Nativity, Pachon 25, recorded by Clemens Alexandrinus*[q].

Cycle xviii. 7. Epoch, Paüni 26. Nabon. 873.

| Months. | Days. | Nab. 873–874 | | |
|---|---|---|---|---|
| i | 30 | Paüni .... 26 | | |
| ii | 29 | Epiphi .... 26 | | |
| iii | 30 | Mesore .... 25 | | |
| iv | 29 | Thoth .... 20 | August.... 11 | A. D. 126. |
| v | 30 | Phaophi .. 19 | September 9 | |
| vi | 29 | Athyr .... 19 | October .. 9 | |
| vii | 30 | Chœac .... 18 | November 7 | |
| viii | 29 | Tybi...... 18 | December.. 7 | |
| ix | 30 | Mecheir .. 17 | January .. 5 | A. D. 127. |
| x | 29 | Phamenoth 17 | February .. 4 | |
| xi | 30 | Pharmuthi 16 | March .... 5 | |
| xii | 29 | Pachon .. 16 | April..... 4 | |

10th luna of Pachon, Pachon 25, April 13.

This date consequently was to be reduced first and properly to the Apis calendar of the time being. It confirms the old and genuine tradition of the church respecting the date of the Nativity as handed down in terms of the lunar calendar; viz. never any thing but the *luna decima.*

SECTION XII.—ix. *Correction of the date of the Thesmophoria in the Attic Calendar*, A. D. 127.

We have had occasion in a former part of our work[r] to state that the Athenians corrected their calendar for the first time, after the reception of the Metonic correction into public use at Athens, (B. C. 425,) only in A. D. 127; and that this was the date of the most proper and most genuine, if not the

p Prolegom. iii. 167–170. q Ib. 145. r Diss. vii. ch. v. sect. iii. vol. i. 602.

only proper and genuine, type of the Julian calendar of the Athenians.

The type of the Julian calendar which they adopted on this occasion was the Alexandrine, not the Roman, and its epoch, within 5 days, agreed with the Alexandrine; this latter being August 29 and 30, the Athenian September 3 and 4. This fact is sufficient to imply a leaning of the Athenians to the Egyptians at this time, for some reason or other; whether out of compliment to Adrian, who was among them at this time, and had recently served the office of Archon at Athens, yet himself entertained a like partiality for Egypt, and was himself proposing to visit it in person; or because of a secret persuasion of the Athenians themselves that they were ultimately a colony from Saïs in Egypt, and so far had a kind of hereditary interest in the wisdom and learning and institutions of that country.

But though they borrowed the cycle of the leap-year in this Julian calendar of their own, and the details of the calendar in other respects, from the Alexandrine; they took the epoch from their own Metonic calendar: for it may be proved that September 4, the date of the first cycle of leap-year in this new solar calendar of the Athenians, was also the first day of Boëdromion in their vulgar Metonic calendar, continued without correction from B. C. 432 or 425 to A. D. 127. They did not therefore altogether discard their old lunar calendar when they adopted this Julian one also. There is every reason to believe it was still retained for certain purposes. But they revised and corrected some of its dates, especially the most important of them: the calendar lunar dates and the true, at this period in the history of the Metonic correction properly so called, being totally disproportionate one to the other.

Now there was no ceremony in the Attic ritual which so nearly resembled the Egyptian Isia, as that of their Thesmophoria. Nor will this appear surprising, as soon as it is known that the Attic Thesmophoria originally were absolutely the same with the Egyptian Isia. This is not indeed the place to enter on the proof of that identity; but, if we are permitted to get so far in the completion of our work, we hope to do so in due time.

It must be known to some of our readers, that there is a difficulty connected with the date of the Attic Thesmophoria, arising from an apparent conflict of testimony on that point; that, to judge from the testimony of Plutarch, the four days of the Thesmophoria must have begun on the 14th of Pyanepsion; to judge from that of the grammarians and scholiasts of later date, they must have begun on the 10th. We have seen no proper attempt to explain this difficulty: or to reconcile these different inferences one with the other. But this *may* be done; and it is at once done, by means of the fact to which we have just adverted; viz. that when the Athenians adopted the Julian calendar, though they did not lay aside the lunar, they rectified some of its dates; and especially that of the Thesmophoria: and, as was naturally to be expected beforehand under the circumstances of the case, they corrected their lunar calendar in this instance by the Apis calendar of the Egyptians.

The old and original date of the Thesmophoria, from the time of Solon downwards at least, was that which we recover through Plutarch; Pyanepsion 14: and Pyanepsion, in the Attic calendar, being assumed to be the same with Athyr in the Egyptian calendar of Apis, the 14th of Pyanepsion is the same as the 14th of Athyr. The Attic Pyanepsion and the Egyptian Athyr were virtually coinciding A. D. 127: only there was nominally four days difference between them; Pyanepsion in the lunar Attic calendar was four days* in advance of Athyr in the Apis of the Egyptians. Consequently Athyr 14 in the latter corresponded to Pyanepsion 10 in the former, and Pyanepsion 14 in the

* In strictness five days. But one of these days would be considered an accidental difference, and would consequently be retrenched. In the Attic calendar, A. D. 127 corresponded to Period viii. Cycle ii. 8; and in the Apis calendar to Nab. 874–875, Cycle xviii. 8: so that the year of the cycle was the same in each. Hecatombæon in the former bore date July 6: but as it followed two months of 30 days each, (as it necessarily did in the 8th year of the cycle,) its proper lunar date was evidently July 5. And Hecatombæon 1 being assumed as July 5, it was just four days in advance of the corresponding Apis month in the same year of the cycle, which was July 1. On this principle all the Attic months in this year would be assumed to be four days in advance of the corresponding Apis ones. Consequently Pyanepsion 1 = Athyr 5, and Pyanepsion 10 = Athyr 14.

former to Athyr 18 in the latter. Under these circumstances, it is clear that it would have been no correction of Pyanepsion 14, in the Attic calendar, to substitute for it Athyr 18 or even Athyr 17 in the Apis; though the latter was the stated date of the Isia in that calendar: but it was a correction to substitute the 14th of Athyr for the 14th of Pyanepsion, the stated date of the Thesmophoria in the Attic calendar: for that would reduce the stated date of this rite in the Attic calendar from Pyanepsion 14 to Pyanepsion 10. And though even that would not bring it to a par with the true lunar date of the same denomination, it would make it as true to the moon as the lunar reckoning of the Apis calendar at least; which is all that the Athenians seem to have proposed by the correction itself.

### SECTION XIII.—x. *Natales Apidis* A.D. 70–71.

Suetonius, having occasion to mention some suspicion, to which Titus Cæsar appeared to have given rise, of secretly cherishing a design on the purple even in his father's lifetime, incidentally notices the following fact in his history[s]: "Quam suspicionem auxit, postquam, Alexandriam petens, in consecrando apud Memphim bove Apide diadema gestavit: de more id quidem, rituque priscæ religionis: sed non deerant qui secus interpretarentur."

This last observation, and the fact itself in general, cannot fail to remind the reader of the passage which we quoted from the Commentator on Germanicus Cæsar's Aratus[t]. But its importance to our present purpose consists in the clear and unequivocal testimony which it bears to the fact of the installation of an Apis, with the usual ceremonies, at Memphis, some time when Titus Cæsar was there too, in the reign of Vespasian.

Now there can be no question about the time when he must have been there even on this occasion, in general. It was not before the capture of Jerusalem: though Titus set out on his march against Jerusalem, previously to that, from Alexandria in Egypt[u]: but after the capture, and when the war so far was over. Jerusalem was finally reduced Sept. 8 A.D. 70. If we trace the movements of Titus, after that

s Vita, v. 4. t Diss. xii. ch. i. sect. v. Art. iv. 388. u Josephus, Bell. iv. xi. 5.

event; he was three days at least in Jerusalem[w], Sept. 8–11: and then at Cæsarea, with his army, as if he intended to winter there; Τὸν γὰρ εἰς τὴν Ἰταλίαν πλοῦν ὁ χειμὼν ἐκώλυεν[w].

After this, he is said to have gone to Cæsarea Philippi[x], at the extremity of Judæa on the north, and to have continued a long time there, (συχνόν τ' ἐν αὐτῇ χρόνον ἐπέμενε,) exhibiting all kinds of shows (παντοίας θεωρίας ἐπιτελῶν); yet to have returned to Cæsarea[x] (Stratonis) where he was before: and while he was there, on this second occasion, Simon Gioræ (fil.) lately made prisoner at Jerusalem was brought to him[y]: and he himself celebrated the birthday of his brother Domitian, ix Kal. Novembres[z]: so that he was still at Cæsarea October 24 A. D. 70.

Josephus takes him next to Berytus[a], on the way to Antioch: and here he evidently supposes him to have staid some time[a]: and here too he celebrated his father's birthday[a], xv. Kal. Decembres[b], November 17; almost a month later than that of Domitian, before celebrated at Cæsarea. From Berytus he proceeded to Antioch[c]; and besides what there might be to detain him there, in the capital city of Syria[d], there appears to have been some urgent necessity why he should also repair to the Zeugma on the Euphrates, to meet and confer with the ambassadors of Vologeses, king of Parthia[e]. It is only after all these things and his return to Antioch also that Josephus takes him at last to Egypt; to Alexandria at least in Egypt: and so far attests his actual presence in Egypt, after the close of the Jewish war, as much as Suetonius.

The question is then at what distance of time, after all the preceding events, it is most reasonable to suppose Titus would be or could be in Egypt, and at Memphis in Egypt? He was accompanied by a part of his forces on his march to Egypt[ee]. The distance from Antioch to Memphis in a right line cannot be estimated at less than 600 Roman miles: and at the rate of even 20 miles a day that would require a

[w] Josephus, Bell. vii. i. 3.
[x] Ibid. ii. 1.
[y] Ibid. ii. 1.
[z] Ibid. iii. 1: cf. Suetonius, Domitian, i. 1: xiii. 8.
[a] Ibid. iii. 1. cf. iv. 1: v. 1.
[b] Suetonius, Vespasian, ii. 1: xxiv. 3.
[c] Josephus, Bell. vii. v. 1, 2.
[d] Cf. ibid. vii. iii. 2—4. Ant. Jud. xii. iii. 1.
[e] Bell. vii. v. 2, 3.
[ee] Bell. vii. v. 3.

month's journey. If then he was still at Antioch at the end of December, A. D. 70; he could scarcely have been already in Egypt before the end of January A. D. 71.

He made no longer a stay in Egypt than the necessity of the case appears to have required: and when the ceremony at Memphis was over, he used so much the more despatch, according to Suetonius, in returning to Italy, because of the suspicion to which it had given occasion: Quare festinans in Italiam cum Rhegium dehinc Puteolos oneraria nave adpulisset[f]. Yet no one would have thought of venturing to sea, at this time, before the stated date of the flatus Favonii, viii Idus Februarias; and we know no more of the actual date of his arrival in Italy at last, than that it was some time before the date of his triumph; celebrated between March 1 and July 1 A. D. 71[g].

Now the sixteenth Apis cycle from the epoch of Mesore 30 Nab. 442. would bear date Mesore 30 Nab. 817, July 31 A. D. 70: and the lunar Phamenoth of that year, January 24 A. D. 71. According to the ancient rule of the Natales, they would begin on the 8th of this lunar month, (answering to Mecheir 29 in the solar calendar of the time,) and last to the 15th; from January 31 to Feb. 7. The act attributed to Titus, in some part of the ceremony which made it necessary for him to put on the insigne of royalty, was most probably connected with the libation to Phthas, or the Nile, on the last day; and with the dedication of the phial by casting it into the Nile: for this having always been performed by the kings, or by the highest civil authorities in Egypt, it could not be so properly performed by any one on this occasion, as by Titus, the son of Vespasian and the representative of the imperial majesty. This is the true explanation of his conduct, and in particular of his putting on the diadem for this occasion; but for this only. Whether the date of this part of the ceremony at this time was the full moon of the lunar Phamenoth, as it had been originally, may be a question. But there could not be many days' difference between the

f Vita v. 5: cf. Josephus, Bell. vii. v. 3.

g Cf. Suetonius, Domitian, ii. 2. Josephus, vii. v. 3—6, 7. Dissertations on the Principles and Arrangements of an Harmony of the Gospels: Diss. xv. ii. 67. note.

original date and even any other, which might have been substituted for it. We have shewn however that, all things considered, Titus could scarcely have been at Memphis in Egypt before the stated time of the natales according to the original rule, Jan. 31—Feb 7: and that must do much to prove that the old rule of the natales was still in force.

## SECTION XIV.—xi. *Appearance of the Apis in the reign of Adrian.*

There is yet another appearance of the Apis on record, closely connected with the preceding; for which reason we proceed to consider it next to that. We learn the time and the circumstances of this appearance from Spartian's life of Adrian[h].

"Compositis in Britannia rebus," says he, in his account of that emperor, "transgressus in Galliam Alexandrina seditione turbatus (est), quæ nata est ob Apin; qui quum repertus esset post multos annos turbas inter populos creavit; apud quem deberet locari omnibus studiose certantibus."

The first inquiry then concerns the date of this event in the reign of Adrian. The manifestation of the Apis, it appears, coincided with his return from Britain, and his coming into Gaul. We must therefore if possible trace his movements, from the beginning of his reign down to this point of time.

i. Adrian is adopted by Trajan (himself at that time at Antioch in Syria, Trajan at Selinus in Cilicia) v. Id. Aug. Aug. 9. A. D. 117: and on the iii. Id. Aug. (Aug 11 the date of his reign,) he hears of the death of Trajan, while still at Antioch[i].

ii. He leaves Antioch for the first time after the death of Trajan, to meet his reliquiæ or ashes[k]. These are despatched to Rome by sea; he himself, having first returned again to Antioch, travelling thither by land, through Illyricum. All this no doubt in A. D. 117: only after August 11 that year.

iii. There being reason to apprehend an invasion of Mœsia by the barbarians, he leaves Rome (for the first time since

h Historiæ Aug. SS. Vita, 12.

i Spartian, Vita, 4. There is a difficulty connected with these statements, about which we refer to our Dissertations, App. Diss. xx. vol. iv. 420.

k Ibid. 5. 6: cf. Dio. lxix. 2.

his arrival) to repair to that quarter; which, it may be safely assumed, would be some time in A. D. 118[l]. On returning to Rome, he cancels all debts to the fiscus or exchequer for 16 years and upwards last past[m].

iv. Soon after each of these things mention is made of the celebration of his birthday at Rome, Jan. 24[n], and of shows of gladiators which lasted six days[o], including, as we apprehend, both the ordinary Ludi Palatini in January at this time, (Jan. 17—22[p]) and the extraordinary ones, in honour of the emperor's birthday.

v. Mention is next made of Adrian's *third* consulate, as held four months[q], i. e. from Jan. 1 A. D. 119 to May 1, the same year: all which time he was still at Rome.

vi. From Rome he set out at last to Campania[r]; probably in A. D. 119, only after May 1: "Post hæc profectus in Gallias[s]: — "Inde in Germaniam[s]: — Lastly, Britanniam petiit[t]" where, among other things done while he was on the spot, a wall was built 80 miles in length[t].

vii. After this[u] comes in the notice above quoted, relating to his return from Britain; and synchronously with it the fact of the appearance of the Apis. Lastly; "Post hæc Hispanias petit, et Tarracone *hyemavit*:" from which intimation it is clearly to be collected that he must have returned from Britain in the autumnal quarter of some year: and, if that was not A. D. 119, it could not have been earlier than A. D. 120. But it might be A. D. 120. If so, the appearance of the Apis, and the disturbances in Egypt produced by it, must have coincided critically with the end of the summer quarter, and the beginning of the autumnal, A. D. 120.

The xviiith Apis cycle, from Mesore 30 Nab. 442, would bear date Mesore 30 Nabon. 867, July 18 A.D. 120. It does not seem to be implied by Spartian's allusion to the fact of this appearance, that it must have been coincident with the natales; before which, the question where the Apis was to be kept must have been decided; but simply with that of its first recognition, after which, according to the ordinary rule,

l Spartian, Vita, 6.

m Ibid. 7. Cf. Dio, lxix. 7: lxxi. 32.

n Vita, 1: ix kal. Feb. A. D. 76.

o Vita, 7, 8: Dio, lxix. 7.

p Constantian Calendar: cf. Josephus, Ant. Jud. xix. i. 11—14: Suetonius, Caius, lvi. 4. lviii. 1.

q Vita, 8. r Ibid. 9. s Ibid. 10.

t Ibid. 11. u Ibid. 12.

it should have been removed to Nilopolis. The stated date of this recognition, according to the modification of the old rule which we believe to have been in force at this time, would be Phaophi 24 or 25, Nab. 868, Sept. 15 or 16 A. D. 120. These disturbances in Egypt therefore, if actually excited by this appearance of an Apis, and about this time, might be expected to come to the knowledge of Adrian A. D. 120, just when they appear to have done; viz. as he was returning from Britain into Gaul, and preparing to proceed thence to pass the winter at Tarraco in Spain*.

* There is an allusion to the Apis in the Sibylline oracles, as they are commonly called: but which we ourselves have had occasion to shew to be an apocryphal Christian production[w].

The principal part of these compositions, if not the whole of them, appears to belong to the reign of Adrian. We cannot however suppose the allusion to the Apis, which occurs in them, to be meant of this appearance in the time of Adrian; because it assumes the state of the case, with respect to the Apis itself, to be the reverse of that which is said to have characterised this manifestation; viz. its being expelled and ejected from Egypt, not adopted and consecrated there.

*Τὴν λιπαρὴν Αἴγυπτον ἀεὶ σταχύεσσι βρύουσαν,*
*ἣν Νεῖλος νηκτοῖς ὑπὸ χεύμασιν ἑπτὰ μεθύσκει,*
*ἀνθρώπων ἔμφυλος ὀλεῖ στάσις· ἔνθεν ἀέλπτως*
*ἀνέρες ἐξελάσουσι τὸν οὐ θεὸν ἀνδράσιν Ἆπιν.*

Lib. vii. p. 655. l. 1. (Gallæi,) Amstelodami, 1689.

And yet the allusion to this subject at all, and this prediction of the future treatment of the Apis, might be suggested by this appearance of one in the reign of Adrian, and by the local disturbances amounting to something like civil war among the nomes, about its reception, with which it was accompanied.

We have met with nothing, on record in history, later than this incident in the reign of Adrian, to illustrate the Apis cycle of type iii. Yet cycles, belonging to this type, would both end and begin A. D. 145, in the reign of Antoninus Pius, and A. D. 170, in that of Marcus Aurelius, and A. D. 195, in that of Severus, and A. D. 220, in that of Antoninus surnamed Heliogabalus, Elagabalus, or Alagabalus.

Lucian was living, and, as we believe, writing, A. D. 145: and he was acquainted both with the Apis, and with the length of his cycle. There is reason too to infer that there must have been a disturbance in Egypt in the reign of Marcus Aurelius, excited by the caste of the Bucolici, or herdsmen[x]; and the time, as nearly as we can conjecture, must have been

[w] Exposition of the Parables, v. part ii.: Appendix, ch. viii. 172–237.

[x] Historiæ Aug. SS. Capitolinus, M. Antoninus Ph. 21. Gallicanus, Avidius Cassius, 6.

# CHAPTER VII.

## *On the fourth epoch and fourth type of the Apis cycle.*

### SECTION I.—*The worship of the Apis not all at once superseded by Christianity itself.*

WE need not enter formally on the discussion of the question at what point of time, later than the date of the introduction of Christianity into Egypt, the worship of the Apis in that country must have ceased. There is no doubt that, in proportion as Christianity extended itself every where, in the same proportion the ancient superstitions, and every form of polytheism and of false religion, would give way and retreat before it; and in the course of time must have been totally extinguished and universally supplanted by it. Yet it would not be possible to say when this consummation, in

about that of the xxth cycle, A. D. 170. Disturbances, in which the Bucolici took a prominent part, might very naturally be connected with an appearance of the Apis. These Bucolici indeed, in the passages above referred to, are designated as *milites* of some kind. But they must also have been Egyptians.

We know nothing of the history of Egypt in A. D. 195: one of the years in which the contest for the purple between Severus and Niger was going on. It cannot however be supposed that Ælian, who of all antiquity has left the most circumstantial account of the birth, the recognition, and the installation of the Apis, could have known of no appearance in his own time, followed by such ceremonies as he describes.

The exact date of his Historia Animalium perhaps is not now capable of being ascertained. Yet it appears to have been earlier than that of the rise of the second Persian empire[y], A. D. 226; and it quotes the history of Dio Cassius[z], which had been written, and very probably in great part published, before the same time. From the life of Ælian by Philostratus[a] we learn that he was a Roman citizen: and we may also infer[b] that he was critically contemporary with the death of the impure Heliogabalus, whom he there calls Γύννις: March 11 A. D. 222. If so, he must have been living when the xxiid cycle A. D. 220 was in course: and as he lived to be upwards of 60[c], he must have witnessed the xxist also, A. D. 195: and possibly might even remember that of A. D. 170.

[y] ix. 29. [z] x. 1. [a] ii. 618. D. Ælianus. [b] 619. B—D: Cf. Suidas, in Γύννις. [c] 619. D.

a particular instance, was effected; when and where the last vestiges of Paganism disappeared from the field, which they had so long and so obstinately contested with Christianity itself.

With respect to the Egyptian Apis, and to the other objects of worship in Egypt; Bardesanes Syrus, born at Edessa anno 465, A. D. 154[d], observes: *Οὐχ οἱ ἐν Αἰγύπτῳ (Χριστιανοὶ) θρησκεύουσι τὸν Ἆπιν ἢ τὸν κύνα ἢ τὸν τράγον ἢ αἴλουρον*[e]. — Clemens Alexandrinus, A. D 193: *Τὸν Ἆπιν Μεμφῖται σέβουσιν*[f] — and even Theodoret, cir. A. D. 453, speaking of the moon: *Ταύτῃ δὲ τὸν Ἆπιν, τὸν βοῦν δὴ λέγω, Αἰγύπτιοι τρέφουσι, τὸν δὲ Μνεῦιν τῷ ἡλίῳ*[g]: each of which recognises, or appears to recognise, its still continued existence in the time of the writer. The testimony of Ælian must be decisive that the credit of the Apis was yet high in his days, and that he had still many worshippers in Egypt. Tertullian his contemporary was acquainted with priests of the Apis, and with their rules of life in his time[h]: Novimus et continentes viros et quidem tauri illius Ægyptii antistites. Minucius Felix recognises the worship of the Apis in his own time: "Nonne et Apim bovem cum Ægyptiis adoratis et pascitis[i]?" The sophist Himerius, a contemporary of the emperor Julian's, speaks of the Apis as one of the wonders of Egypt still[k]. Ammianus Marcellinus, about the same time or even later, describes both it and the Mneuis as existing objects of worship. Macrobius, who was writing in the reign of Theodosius the Great, would give us reason to suppose that not these only, but animals, originally of much inferior note and distinction, were not yet extinct in Egypt. It is well known that the Sarapeum, at Alexandria, or principal temple of Sarapis in Egypt, was destroyed only in the reign of this emperor. We have seen reason to conclude that the Isia continued to be celebrated, according to the old Egyptian rule, as late as the time of Achilles Tatius, circa A. D. 501: and Sidonius Apollinaris, a Christian bishop

d Bibliotheca Orientalis, i. ix. 389: Chronicon Edessenum, vi.

e Contra Fatum, apud Eusebium, Præp. Evang. vi. x. § 46. p. 93.

f Protrepticus, ii. § 39. p. 34. l. 1.

g Græcorum Affectuum Curatio, iii. § 46. 124.

h De Exhortatione Castitatis, 13. iii. 131: cf. De Monogamia, 17. iii. 170.

i xxviii. 9.

k Oratio viii. § 5. p. 548: cf. Photius, Codex 165. p. 108. l. 36.

and poet of the sixth century, would seem to imply that the Apis had votaries, still disposed to sing his praises, even in his own time—

Non Apin Mareoticum sonabo
Ac Memphitica sistra concitari[l].

Notwithstanding these facts however, neither can it be reasonably doubted that, by the time of the accession of Julian the Apostate to the purple, in A. D. 361, the estimation of the Apis even in Egypt was materially impaired, and was fast going to decay; and that even the reckoning of its cycles themselves had probably been interrupted. It is not surprising therefore that something like the proof of each of these things meets us in the reign of Julian. It is well known that under this emperor, notwithstanding the shortness of his reign, great exertions were made to reestablish the ancient religion of the empire: and, among other attempts of this kind, it would seem that a scheme was devised in Egypt, (though not, so far as we know, with his cognizance of it and his privity to it beforehand, yet doubtless, if it had succeeded, in the hope of his approval and sanction of it,) to revive the fame and credit of the Apis, by bringing about a new appearance of one at the beginning of his reign, and by making that the epoch of a fresh type and of a fresh reckoning of the Apis cycle.

Having arrived at this stage of our inquiries into the succession of these Apis types, as matter of history, from first to last, we shall conclude with a brief account of this scheme; such as we have seen reason to infer it was intended to be, had not the speedy death of Julian, and the reaccession of Christian emperors to the throne of Constantine, extinguished the last hopes of Paganism, and put an end both to this and to every similar project for ever.

## Section II.—*Date of the appearance of an Apis in the reign of Julian.*

The death of the emperor Constantius, according to Ammianus Marcellinus[m], is to be dated iii Nonas Octobres, Tauro et Florentio[n], A. D. 361: though Socrates[o] dates it November 3, the same year.

[l] ix. 181.
[m] xxi. 15.
[n] xxii. 3. 7: xxi. 6 (p. 259.) 10. 12. p. 273.
[o] ii. xlvii. 161. D: iii. i. 164. A: cf. Sozomen, v. i. 591. B.

Julian entered Illyricum, on his way to Constantinople, after this event, *ἀμφὶ πλειάδων δύσιν*[p] (Nov. 11 in the Julian calendar;) and shortly after must have arrived at Constantinople: at least before the end of the year, since he passed the winter there[q]. He was proclaimed at Constantinople, December 11[r].

The kalends of January, and the ingress of the consular year of Mamertinus and Nevitta, A. D. 362, are next mentioned[s]; and directly after Ludi Circenses[s]; no doubt those which were usually in course at this time, Jan. 3–5.

Lastly, we have the departure of Julian from Constantinople to go to Antioch, the same year[t], preparatory to the Persian expedition which he was meditating. He arrived there when the Adonia (rites of Tammuz) were going on[t]: that is, at the beginning of July. One of his rescripts, issued at Antioch after this, is dated August 1[u]. He was still there when the Temple of Apollo, at Daphnæ in the suburbs of Antioch, was burnt down; xi kal. Nov. Oct. 22[w]: and iv Nonas Dec. Dec. 2[x], when the residue of Nicomedia was overthrown by a second earthquake. In fact he passed the winter at Antioch; and was still there down to the beginning of March, A. D. 363, when he set out on his Persian expedition: and while he was there, during the winter, he wrote his Misopogon[y], a satire on the people of Antioch, still extant; and his work against Christianity, which is lost.

Libanius, his contemporary, who was at Antioch along with him all this time, thus describes his employment, during his residence in that city, as divided between his public and his religious duties; and its supposed influence on his subjects to the very extremities of the empire[z]: Ἧκεν εἰς τὴν μεγάλην

[p] Sozomen, v. i. 590. C—591. A.

[q] Ammianus Marc. xxi. 12. 268. 271.

[r] Socrates, iii. i. 164. C.

[s] Ammianus Marc. xxii. 7. Cf. xxiii. 1.

[t] Ibid. 9. Cf. xix. 1.

[u] Epistolæ, lii. Opera, 438. C.

[w] Ammianus Marc. xxii. 13. Sozomen, v. xx. 628. C. D. Theodoret. iii. xi. 134. B.

[x] Ammianus loc. cit. The former earthquake happened ix kal. Sept. Aug. 24, A. D. 358, four years before: see Ammianus Marc. xvii. 7. 135: 5. 131. Libanius, lxii. Μονῳδία ἐπὶ Νικομηδείᾳ. Opp. iii. 337–344. Cf. Socrates, ii. xxxix. 146. A. B: iv. xi. 219. B. Sozomen, iv. xvi. 559. A. Philostorgius, iv. 10, 11: 495, 496. Theodoret, ii. xxvi. 109. B.

[y] Ammianus Marc. xxii. 10. 309: 14. 317, 316. Cf. Sozomen, v. xix. 624. B—625. A.

[z] xvii. Μονῳδία ἐπὶ Ἰουλιανῷ, i. 513, 3.

*τὴν Ἀντιόχου πόλιν ... οὗ δὴ μυρίαι μὲν δικαζόμεναι δίκαι ... δρόμοι τε εἰς τεμένη τὰ μὲν ἐν τῇ πόλει τὰ δὲ πρὸ αὐτῆς ἐν γηλόφοις τὰ δ' ἐπ' ἄκροις ὄρεσι ... πυνθανόμενοι δὲ οἱ μέχρι τῶν τερμάτων Αἰγύπτου τε καὶ Λιβύης ὡς ἐρρωμένως ἅπτοιτο τῶν ἱερῶν ὁ βασιλεὺς μικρὰ μὲν ἐχρῶντο ταῖς οἰκίαις ἐν ἱεροῖς δὲ διῃτῶντο.* This allusion to the Egyptians and the Lybians only by name is significant; implying that Libanius knew of something more particularly connected with that part of the empire, which was to be attributed to the example of Julian. With respect to visits to the tops of mountains also mentioned here, those are to be understood of his visits to Mount Casius, in the neighbourhood of Antioch, and sacred to Jupiter: on one of which occasions, if Libanius is to be believed, he had a vision of the god face to face at noon, and was warned by him of some conspiracy against his life: *Καὶ τὰς μὲν ἄλλας συνουσίας μακρὸν ἂν εἴη λέγειν. ἀλλ' εἰς τὸ Κάσιον ὄρος παρὰ τὸν Κάσιον ἀναβὰς Δία, μεσημβρίας σταθερᾶς, εἶδέ τε τὸν θεὸν καὶ ἰδὼν ἀνέστη, καὶ συμβουλὴν ἐδέξατο δι' ἧς πάλιν διαφεύγει λόχον*[a].

Now on one of these occasions, and possibly on the identical one thus referred to by Libanius, (sometime at least between Dec. 2 A. D. 362 and Jan. 1 A. D. 363,) according to Ammianus[b], after having offered sacrifice on the top of this mountain, just as he was come down again, "sacrorum ritu perfecto," he received despatches from the prefect of Egypt, announcing the appearance of an Apis[c]: "Obferuntur rectoris Ægypti scripta, Apim bovem, operosa quæsitum industria, tamen post tempus inveniri potuisse firmantis: quod ut earum regionum existimant incolæ faustum, et ubertatem frugum diversaque indicat bona." And with this piece of news Ammianus closes his account of the events of A. D. 362: opening his next book with the kalends of January and the consular year of Julian iv and Sallustius, A. D. 363.

It is morally certain therefore that this intelligence must have arrived only between Dec. 2 A. D. 362 and Jan. 1 A. D. 363: so that, as Alexandria and Antioch were a

[a] xviii. Ἐπιτάφιος ἐπὶ Ἰουλιανῷ, i. 579. 21.

[b] xxii. 13: xxiii. 1.

[c] xxii. 14.

month's journey at least asunder, unless very great despatch was used in bringing it, the event which it announced could not have happened in Egypt later than the middle of November, A.D. 362. Who was the prefect of Egypt at this time is not of much importance. An Artemius, described as *ex duce Ægypti*[d], (and as the context implies only recently recalled from that office,) was put to death by Julian soon after his coming to Antioch. We conjecture it was Ecdicius; to whom some of his extant epistles are addressed[e].

Now from the whole of that long and circumstantial review which we have been compelled to institute of all the appearances of the Apis on record, it does not appear that the stated time of the public rejoicings on his account coincided in any instance with the time of his birth, or even of his first recognition; but always with that of his first *natales*: the high festival of the Apis ritual every year, and never more truly so called than in the *first* year of every cycle. This being the case, there is every reason to conclude that the discovery, announced on this occasion, was in reality the celebration of the *natales Apidis*: and that the priests had so ordered the matter that both the manifestation of the Apis in his proper person, and his *natales* also, should take place at the same time: and should come alike on the prefect of Egypt and on the people by surprise.

If so, we must look for the celebration of these *natales* in November, A. D. 362; and consequently, if they were celebrated in conformity to the ancient rule, (that is, some time in Phamenoth,) we must expect to find the Egyptian Phamenoth too, A.D. 362, falling in November. This was actually the case. The first of Thoth Nab. 1110 fell May 25 A.D. 362; and consequently Phamenoth 1 Nov. 21. And this was the solar Phamenoth. The lunar Phamenoth might fall several days earlier in the same month.

The xxvii Apis cycle from the epoch of Mesore 30 Nab. 442 would have borne date Mesore 30 Nab. 1092, May 23 A.D. 345; and the 18th year of this cycle, Mecheir 28 Nab. 1109, Nov. 18 A.D. 361. There was a solar eclipse this year,

d Ammianus, xxii. 11. Cf. Theodoret, E. H. iii. xviii.

e vi. Opp. 376. Cf. ix. Opp. 377: l. 432: lvi. 442.

Aug. 17 5h. A. M. at Paris: and therefore a mean new moon, Nov. 13 19 h. 12 m. from midnight: referred to which Nov. 18 at midnight, or Nov. 17 at 18 hours, might be reckoned the *luna quinta*, agreeably to the old rule of the cycle still.

Nov. 18 A.D. 361 however was too early a date for any such project as that which the priests appear to have formed: for this must have been conceived *after* the accession of Julian at least; and that could scarcely have been known in Egypt as yet by Nov. 18 A. D. 361. Besides which, an Apis supposed to have appeared in November, A. D. 361, must have been ready to consecrate in May, A. D. 362; and it would be absurd to suppose that the news of an event, which happened in Egypt in May at the latest, would not have been heard of at Antioch before December, the same year.

The scheme which the priests actually concerted, and actually carried into effect on this occasion, appears to have been as follows. There was a precedent, already established by the change of the epoch and type of the cycle Nab. 442–443 B. C. 306, for treating the 18th year of a current cycle, if necessary, as the 1st year of a new one: and there was also a precedent both in that and in the still earlier change of the epoch and type Nab. 225 B.C. 523–522, for setting back the epoch, if necessary, five days: so that on either of these points or both there would be little difficulty.

Now as the *natales Apidis*, according to the old and original rule, were not more than six lunar months and seven days distant from the epoch; they began with reckoning 177 days from Mecheir 28 the epoch of the 18th year of cycle xxvii; which brought them to Mesore 25 only five days before Mesore 30—the proper epoch of the cycle in the first year: which therefore they determined to assume as the epoch of the new cycle and new type which they were contemplating.

The first of Thoth Nab. 1110 fell on May 25 A. D. 362. Consequently Mesore 25 Nab. 1109 fell on May 14. There was a lunar eclipse that year, July 23 2h. P. M. at Paris: and consequently a mean new moon in May, May 10 18 h. 10 m. from midnight: referred to which May 14 at midnight, or

May 13 at 18 hours, might be reckoned the *luna quinta*, according to the old rule of the cycle.

Now May 14 A. D. 362 being assumed as the date of the lunar Thoth in the first year of an Apis cycle, July 12 would be that of the lunar Athyr; in which, according to the original rule, the birth of the Apis was bound to fall out: and Nov. 7 would be the date of the lunar Phamenoth; and the 8th of that moon, would be Nov. 14; and on that day, according to the old rule, the *natales* would have been bound to begin; lasting to the 15th of the same moon, Nov. 21. The last day of the *natales*, Nov. 21, would be the date of the libation to the Nile, or to Phthas, and of the offering of the phial; and this part of the ceremony would have to be performed by the representative of the Roman emperor; that is, as we apprehend, by Ecdicius, the governor or prefect on the spot. It is exceedingly probable that it was on this day, and after discharging his own part of the ceremony, that Ecdicius despatched his courier to Antioch: whose arrival at Antioch on that supposition could not fail to coincide with the middle or the end of December, as it seems actually to have done. It is observable also that, according to the construction put upon this appearance of an Apis and at this time, it portended *ubertatem frugum*: which, in our opinion, is a significant intimation that the discovery in question must have coincided with that season of the natural year, when the character of the year was matter of hope, not of certainty; that is, with seed time: and that would strictly be the case in the month of November.

We have not thought it worth while to draw out this fourth type of the Apis cycle, as we have done each of the three before it; because, howsoever ingeniously contrived, it proved abortive and short-lived: it speedily came to nothing. We have little doubt however that we have given a true account of it: though we leave it entirely to our readers to judge of that for themselves. If we have divined it rightly, and have represented it faithfully, this scheme of the priests is both useful, and curious, and instructive; useful, as confirming our previous account of the Apis cycle; curious, as illustrating the great artfulness and cunning of this class

of men in ancient times; and instructive, as shewing us with what facility their most sacred institutions, and of the longest standing, could be altered, remodelled, and changed, to serve a particular purpose; and how their most inveterate prejudices could be made to give way to their interests*.

* There is still much to be said to complete the account of the Apis cycle: but we are not yet prepared to enter upon it. The reader however, who may be desirous of pursuing this subject to the end, may pass to Dissertation xviii. ch. i. which treats of the two zodiacs of Denderah; and ch. ii. which treats of the Apis cycle of the primitive solar year; and ch. iii. which treats of the introduction of the worship of Sarapis into Egypt, and of the date of the Sarapea. In this Dissertation, and in its three chapters, every thing we trust will be found supplied, which is still necessary to complete the account of this cycle.

END OF VOL. II.